



SEQUENCE LISTING

<110> Genentech, Inc.
Ashkenazi, Avi
Botstein, David
Desnoyers, Luc
Eaton, Dan L.
Ferrara, Napoleone
Filvaroff, Ellen
Fong, Sherman
Gao, Wei-Qiang
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, A.
Godowski, Paul J.
Grimaldi, Christopher J.
Gurney, Austin L.
Hillan, Kenneth, J.
Kljavin, Ivar J.
Mather, Jennie P.
Pan, James
Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
Tumas, Daniel
Williams, P. Mickey
Wood, William, I.

c
<120> Secreted and Transmembrane Polypeptides and Nucleic
Acids Encoding the Same

<130> 10466-14

<140> 09/665,350

<141> 2000-09-18

<150> PCT/US00/04414

<151> 2000-02-22

<150> US 60/143,048

<151> 1999-07-07

<150> US 60/145,698

<151> 1999-07-26

<150> US 60/146,222

<151> 1999-07-28

<150> PCT/US99/20594

<151> 1999-09-08

<150> PCT/US99/20944

<151> 1999-09-13

<150> PCT/US99/21090

<151> 1999-09-15

<150> PCT/US99/21547
<151> 1999-09-15

<150> PCT/US99/23089
<151> 1999-10-05

<150> PCT/US99/28214
<151> 1999-11-29

<150> PCT/US99/28313
<151> 1999-11-30

<150> PCT/US99/28564
<151> 1999-12-02

<150> PCT/US99/28565
<151> 1999-12-02

<150> PCT/US99/30095
<151> 1999-12-16

<150> PCT/US99/30911
<151> 1999-12-20

<150> PCT/US99/30999
<151> 1999-12-20

<150> PCT/US00/00219
<151> 2000-01-05

<160> 423

<210> 1
<211> 1825
<212> DNA
<213> Homo sapiens

<400> 1
actgcacctc ggttctatcg attgaattcc ccggggatcc tctagagatc cctcgacctc 60
gacccacgcg tccgggcccg agcagcacgg ccgcaggacc tggagctccg gctgcgtctt 120
cccgcagcgc tacccgccat gcgcctgccg cgccgggccg cgctggggct cctgccgctt 180
ctgctgctgc tgccgcccgc gccggaggcc gccaagaagc cgacgccctg ccaccggtgc 240
cgggggctgg tggacaagtt taaccagggg atggtggaca ccgcaaagaa gaactttggc 300
ggcggaaca cggcttggga ggaaaagacg ctgtccaagt acgagtccag cgagattcgc 360
ctgctggaga tcctggaggg gctgtgcgag agcagcgact tcgaatgcaa tcagatgcta 420
gaggcgaggg aggagcacct ggaggcctgg tggctgcagc tgaagagcga atatcctgac 480
ttattcgagt ggttttgtgt gaagacactg aaagtgtgct gctctccagg aacctacggt 540
cccgaactgt tcgcatgccg gggcggatcc cagaggccct gcagcgggaa tggccactgc 600
agcggagatg ggagcagaca gggcgacggg tcctgccggt gccacatggg gtaccagggc 660
ccgctgtgca ctgactgcat ggacggctac ttcagctcgc tccggaacga gacccacagc 720
atctgcacag cctgtgacga gtcctgcaag acgtgctcgg gcctgaccaa cagagactgc 780
ggcagagtgt aagtgggctg ggtgctggac gagggcgctt gtgtggatgt ggacgagtgt 840
gcggccgagc cgctccctg cagcgtgcg cagttctgta agaacgcaa cggctcctac 900
acgtgcgaag agtgtgactc cagctgtgtg ggctgcacag gggaaggccc aggaaactgt 960
aaagagtgtg tctctggcta cgcgagggag cacggacagt gtgcagatgt ggacgagtgc 1020
tcactagcag aaaaaacctg tgtgaggaaa aacgaaaact gctacaatac tccagggagc 1080

```

tacgtctgtg tgtgtcctga cggcttcgaa gaaacggaag atgcctgtgt gccgccggca 1140
gaggctgaag ccacagaagg agaaagcccg acacagctgc cctcccgcga agacctgtaa 1200
tgtgccggac ttacccttta aattattcag aaggatgtcc cgtggaaaat gtggccctga 1260
ggatgccgtc tcctgcagtg gacagcggcg gggagaggct gcctgctctc taacggttga 1320
ttctcatttg tcccttaaac agctgcattt cttggttgtt cttaaacaga cttgtatatt 1380
ttgatacagt tctttgtaat aaaattgacc attgtaggta atcaggagga aaaaaaaaaa 1440
aaaaaaaaaa aaagggcggc cgcgactcta gagtcgacct gcagaagctt ggccgccatg 1500
gcccacttg tttattgcag cttataatgg ttacaaataa agcaatagca tcacaaattt 1560
cacaaataaa gcattttttt cactgcattc tagttgtggt ttgtccaaac tcatcaatgt 1620
atcttatcat gtctggatcg ggaattaatt cggcgcagca ccatggcctg aaataacctc 1680
tgaaagagga acttggttag gtaccttctg aggcggaaag aaccagctgt ggaatgtgtg 1740
tcagttaggg tgtggaaagt ccccaggctc ccagcaggc agaagtatgc aagcatgcat 1800
ctcaattagt cagcaacca gtttt 1825

```

<210> 2
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 2

Met	Arg	Leu	Pro	Arg	Arg	Ala	Ala	Leu	Gly	Leu	Leu	Pro	Leu	Leu	Leu	
1				5					10					15		
Leu	Leu	Pro	Pro	Ala	Pro	Glu	Ala	Ala	Lys	Lys	Pro	Thr	Pro	Cys	His	
			20					25					30			
Arg	Cys	Arg	Gly	Leu	Val	Asp	Lys	Phe	Asn	Gln	Gly	Met	Val	Asp	Thr	
		35					40					45				
Ala	Lys	Lys	Asn	Phe	Gly	Gly	Gly	Asn	Thr	Ala	Trp	Glu	Glu	Lys	Thr	
	50					55					60					
Leu	Ser	Lys	Tyr	Glu	Ser	Ser	Glu	Ile	Arg	Leu	Leu	Glu	Ile	Leu	Glu	
65					70					75					80	
Gly	Leu	Cys	Glu	Ser	Ser	Asp	Phe	Glu	Cys	Asn	Gln	Met	Leu	Glu	Ala	
				85					90					95		
Gln	Glu	Glu	His	Leu	Glu	Ala	Trp	Trp	Leu	Gln	Leu	Lys	Ser	Glu	Tyr	
			100					105					110			
Pro	Asp	Leu	Phe	Glu	Trp	Phe	Cys	Val	Lys	Thr	Leu	Lys	Val	Cys	Cys	
		115					120					125				
Ser	Pro	Gly	Thr	Tyr	Gly	Pro	Asp	Cys	Leu	Ala	Cys	Gln	Gly	Gly	Ser	
130						135					140					
Gln	Arg	Pro	Cys	Ser	Gly	Asn	Gly	His	Cys	Ser	Gly	Asp	Gly	Ser	Arg	
145					150					155					160	
Gln	Gly	Asp	Gly	Ser	Cys	Arg	Cys	His	Met	Gly	Tyr	Gln	Gly	Pro	Leu	
				165					170					175		
Cys	Thr	Asp	Cys	Met	Asp	Gly	Tyr	Phe	Ser	Ser	Leu	Arg	Asn	Glu	Thr	
			180					185					190			
His	Ser	Ile	Cys	Thr	Ala	Cys	Asp	Glu	Ser	Cys	Lys	Thr	Cys	Ser	Gly	

195	200	205
Leu Thr Asn Arg Asp Cys Gly Glu Cys Glu Val Gly Trp Val Leu Asp		
210	215	220
Glu Gly Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Pro Pro Pro		
225	230	235 240
Cys Ser Ala Ala Gln Phe Cys Lys Asn Ala Asn Gly Ser Tyr Thr Cys		
	245	250 255
Glu Glu Cys Asp Ser Ser Cys Val Gly Cys Thr Gly Glu Gly Pro Gly		
	260	265 270
Asn Cys Lys Glu Cys Ile Ser Gly Tyr Ala Arg Glu His Gly Gln Cys		
	275	280 285
Ala Asp Val Asp Glu Cys Ser Leu Ala Glu Lys Thr Cys Val Arg Lys		
	290	295 300
Asn Glu Asn Cys Tyr Asn Thr Pro Gly Ser Tyr Val Cys Val Cys Pro		
	305	310 315 320
Asp Gly Phe Glu Glu Thr Glu Asp Ala Cys Val Pro Pro Ala Glu Ala		
	325	330 335
Glu Ala Thr Glu Gly Glu Ser Pro Thr Gln Leu Pro Ser Arg Glu Asp		
	340	345 350

Leu

<210> 3
 <211> 2206
 <212> DNA
 <213> Homo sapiens

<400> 3

cagggtccaac	tgcacctcgg	ttctatcgat	tgaattcccc	ggggatcctc	tagagatccc	60
tgcacctcga	cccacgcgtc	cgccaggccg	ggaggcgacg	cgcccagccg	tctaaacggg	120
aacagccctg	gctgagggag	ctgcagcgca	gcagagtatc	tgacggcgcc	aggttgcgta	180
ggtgcggcac	gaggagtttt	cccggcagcg	aggaggtcct	gagcagcatg	gcccggagga	240
gcgccttccc	tgccgcgcgc	ctctggctct	ggagcatcct	cctgtgcctg	ctggcactgc	300
gggcggaggc	cgggccgcgc	caggaggaga	gcctgtacct	atggatcgat	gctcaccagg	360
caagagtact	cataggattt	gaagaagata	tcctgattgt	ttcagagggg	aaaatggcac	420
cttttacaca	tgatttcaga	aaagcgcaac	agagaatgcc	agctattcct	gtcaatatcc	480
attccatgaa	ttttacctgg	caagctgcag	ggcaggcaga	atacttctat	gaattcctgt	540
ccttgcgctc	cctggataaa	ggcatcatgg	cagatccaac	cgtcaatgtc	cctctgctgg	600
gaacagtgcc	tcacaaggca	tcagttgttc	aagttggttt	cccatgtctt	ggaaaacagg	660
atgggggtggc	agcatttgaa	gtggatgtga	ttgttatgaa	ttctgaaggc	aacaccattc	720
tccaaacacc	tcaaaatgct	atcttcttta	aaacatgtca	acaagctgag	tgcccaggcg	780
ggtgcgcgaaa	tggaggcttt	tgtaatgaaa	gacgcacatg	cgagtgtcct	gatgggttcc	840
acggacctca	ctgtgagaaa	gccctttgta	ccccacgatg	tatgaatggg	ggactttgtg	900
tgactcctgg	tttctgcatc	tgcccacctg	gattctatgg	agtgaactgt	gacaaagcaa	960
actgctcaac	cacctgcttt	aatggaggga	cctgtttcta	ccctggaaaa	tgtatttgcc	1020
ctccaggact	agagggagag	cagtgtgaaa	tcagcaaatg	cccacaaccc	tgtcgaaatg	1080
gaggtaaatg	cattgggtaaa	agcaaagtga	agtgttccaa	aggttaccag	ggagacctct	1140


```

gttcaaagcc tgtctgcgag cctggctgtg gtgcacatgg aacctgccat gaacccaaca 1200
aatgccaatg tcaagaaggt tggcatggaa gacactgcaa taaaaggtag gaagccagcc 1260
tcatacatgc cctgaggcca gcaggcgccc agctcaggca gcacacgcct tcacttaaaa 1320
agggcgagga gcggcgggat ccacctgaat ccaattacat ctgggtgaact ccgacatctg 1380
aaacgtttta agttacacca agttcatagc ctttgtaaac ctttcatgtg ttgaatgttc 1440
aaataatgtt cattacactt aagaatactg gcctgaattt tattagcttc attataaatc 1500
actgagctga tatttactct tccttttaag ttttctaagt acgtctgtag catgatggta 1560
tagattttct tgtttcagtg ctttgggaca gattttatat tatgtcaatt gatcagggta 1620
aaattttcag tgtgtagttg gcagatattt tcaaaattac aatgcattta tgggtgtctg 1680
gggcagggga acatcagaaa ggttaaattg ggcaaaaatg cgtaagtcac aagaatttg 1740
atggtgcagt taatgttgaa gttacagcat ttcagatttt attgtcagat atttagatgt 1800
ttgttacatt tttaaaaatt gctcttaatt tttaaactct caatacaata tattttgacc 1860
ttaccattat tccagagatt cagtattaaa aaaaaaaaaa ttacactgtg gtagtggcat 1920
ttaaacaata taatatattc taaacacaat gaaataggga atataatgta tgaacttttt 1980
gcattggctt gaagcaatat aatatattgt aaacaaaaca cagctcttac ctaataaaca 2040
ttttatactg tttgtatgta taaaataaag gtgctgcttt agtttttttg aaaaaaaaaa 2100
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gggcggccgc gactctagag tcgacctgca 2160
gaagcttggc cgccatggcc caacttgttt attgcagctt ataataatg 2206

```

```

<210> 4
<211> 379
<212> PRT
<213> Homo sapiens

```

```

<400> 4
Met Ala Arg Arg Ser Ala Phe Pro Ala Ala Ala Leu Trp Leu Trp Ser
 1              5              10              15

Ile Leu Leu Cys Leu Leu Ala Leu Arg Ala Glu Ala Gly Pro Pro Gln
      20              25              30

Glu Glu Ser Leu Tyr Leu Trp Ile Asp Ala His Gln Ala Arg Val Leu
      35              40              45

Ile Gly Phe Glu Glu Asp Ile Leu Ile Val Ser Glu Gly Lys Met Ala
      50              55              60

Pro Phe Thr His Asp Phe Arg Lys Ala Gln Gln Arg Met Pro Ala Ile
      65              70              75              80

Pro Val Asn Ile His Ser Met Asn Phe Thr Trp Gln Ala Ala Gly Gln
      85              90              95

Ala Glu Tyr Phe Tyr Glu Phe Leu Ser Leu Arg Ser Leu Asp Lys Gly
      100             105             110

Ile Met Ala Asp Pro Thr Val Asn Val Pro Leu Leu Gly Thr Val Pro
      115             120             125

His Lys Ala Ser Val Val Gln Val Gly Phe Pro Cys Leu Gly Lys Gln
      130             135             140

Asp Gly Val Ala Ala Phe Glu Val Asp Val Ile Val Met Asn Ser Glu
      145             150             155             160

Gly Asn Thr Ile Leu Gln Thr Pro Gln Asn Ala Ile Phe Phe Lys Thr
      165             170             175

```

Cys Gln Gln Ala Glu Cys Pro Gly Gly Cys Arg Asn Gly Gly Phe Cys
 180 185 190
 Asn Glu Arg Arg Ile Cys Glu Cys Pro Asp Gly Phe His Gly Pro His
 195 200 205
 Cys Glu Lys Ala Leu Cys Thr Pro Arg Cys Met Asn Gly Gly Leu Cys
 210 215 220
 Val Thr Pro Gly Phe Cys Ile Cys Pro Pro Gly Phe Tyr Gly Val Asn
 225 230 235 240
 Cys Asp Lys Ala Asn Cys Ser Thr Thr Cys Phe Asn Gly Gly Thr Cys
 245 250 255
 Phe Tyr Pro Gly Lys Cys Ile Cys Pro Pro Gly Leu Glu Gly Glu Gln
 260 265 270
 Cys Glu Ile Ser Lys Cys Pro Gln Pro Cys Arg Asn Gly Gly Lys Cys
 275 280 285
 Ile Gly Lys Ser Lys Cys Lys Cys Ser Lys Gly Tyr Gln Gly Asp Leu
 290 295 300
 Cys Ser Lys Pro Val Cys Glu Pro Gly Cys Gly Ala His Gly Thr Cys
 305 310 315 320
 His Glu Pro Asn Lys Cys Gln Cys Gln Glu Gly Trp His Gly Arg His
 325 330 335
 Cys Asn Lys Arg Tyr Glu Ala Ser Leu Ile His Ala Leu Arg Pro Ala
 340 345 350
 Gly Ala Gln Leu Arg Gln His Thr Pro Ser Leu Lys Lys Ala Glu Glu
 355 360 365
 Arg Arg Asp Pro Pro Glu Ser Asn Tyr Ile Trp
 370 375

<210> 5

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 5

agggagcacg gacagtgtgc agatgtggac gagtgtcac tagca

45

<210> 6

<211> 21

<212> DNA

<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 6
 agagtgtatc tctggctacg c 21

<210> 7
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 7
 taagtccggc acattacagg tc 22

<210> 8
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 8
 cccacgatgt atgaatggtg gactttgtgt gactcctggt ttctgcatc 49

<210> 9
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 9
 aaagacgcat ctgcgagtgt cc 22

<210> 10
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 10
 tgctgatttc aactgctct ccc 23

<210> 11
 <211> 2197

<212> DNA
<213> Homo sapiens

<400> 11

```
cggacgcgtg ggcgtccggc ggtcgcagag ccaggaggcg gaggcgcgcg ggccagcctg 60
ggccccagcc cacaccttca ccagggccca ggagccacca tgtggcgatg tccactgggg 120
ctactgctgt tgctgccgct ggctggccac ttggctctgg gtgccagca gggtcgtggg 180
cgccgggagc tagcaccggg tctgcacctg cggggcatcc gggacgcggg aggccggtag 240
tgccaggagc aggacctgtg ctgcccgggc cgtgccgacg actgtgccct gccctacctg 300
ggcgccatct gttactgtga cctcttctgc aaccgcacgg tctccgactg ctgccctgac 360
ttctgggact tctgcctcgg cgtgccaccc ctttttcccc cgatccaagg atgtatgcat 420
ggaggctgta tctatccagt cttgggaacg tactgggaca actgtaaccg ttgcacctgc 480
caggagaaca ggcagtggca tgggtggatcc agacatgatc aaagccatca accaggggcaa 540
ctatggctgg caggctggga accacagcgc cttctggggc atgaccctgg atgagggcac 600
tcgctaccgc ctgggcacca tccgcccata ttctcgggtc atgaacatgc atgaaattta 660
tacagtgtcg aaccaggggg aggtgcttcc cacagccttc gaggcctctg agaagtggcc 720
caacctgatt catgagcctc ttgaccaagg caactgtgca ggctcctggg ccttctccac 780
agcagctgtg gcatccgata gtgtctcaat ccattctctg ggacacatga cgctgtcct 840
gtcgccccag aacctgctgt cttgtgacac ccaccagcag cagggctgcc gcggtgggcg 900
tctcgatggg gcttgggtgt tcttgcgtcg ccgaggggtg gtgtctgacc actgctaccc 960
cttctcgggc cgtgaacgag acgaggctgg ccctgcgccc cctgtatga tgcacagccg 1020
agccatgggt cggggcaagc gccaggccac tgcccactgc cccaacagct atgttaataa 1080
caatgacatc taccaggtca ctctgtcta ccgcctcggc tccaacgaca aggagatcat 1140
gaaggagctg atggagaatg gccctgtcca agccctcatg gaggtgcatg aggacttctt 1200
cctatacaag ggaggcatct acagccacac gccagtgagc cttgggaggc cagagagata 1260
ccgcccgcac gggacccact cagtcaagat cacaggatgg ggagaggaga cgctgccaga 1320
tggaaggacg ctcaaatact ggactgcggc caactcctgg ggcccagcct ggggcgagag 1380
gggccacttc cgcctcgtgc gcggcgtaaa tgagtgcgac atcgagagct tcgtgctggg 1440
cgtctggggc cgcgtgggca tggaggacat gggatcatcag tgaggctgcg ggcaccacgc 1500
ggggtccggc ctgggatcca ggctaagggc cggcggaaga ggccccaatg gggcggtgac 1560
cccagcctcg cccgacagag cccggggcgc aggcggggcg cagggcgcta atcccggcgc 1620
gggttccgct gacgcagcgc cccgcctggg agccgcgggc aggcgagact ggcggagccc 1680
ccagacctcc cagtggggac ggggcagggc ctggcctggg aagagcacag ctgcagatcc 1740
caggcctctg gcgccccac tcaagactac caaagccagg acacctcaag tctccagccc 1800
caatacccca ccccaatccc gtattctttt tttttttttt ttagacaggg tcttgcctcg 1860
ttgccagggt tggagtgcag tggcccactg gggtcactg taacctccga ctctggggtt 1920
caagtgaccc tcccacctca gcctctcaag tagctgggac tacaggtgca ccaccacacc 1980
tggctaattt ttgtattttt tgtaaagagg ggggtctcac tgtgttgccc aggtcgtgtt 2040
cgaactcctg ggctcaagcg gtccacctgc ctccgcctcc caaagtgcgt ggattgcagg 2100
catgagccac tgcaccacgc cctgtattct tattcttcag atatttattt ttcttttcac 2160
tgttttaaaa taaaaccaa gtattgataa aaaaaaa 2197
```

<210> 12
<211> 164
<212> PRT
<213> Homo sapiens

<400> 12

```
Met Trp Arg Cys Pro Leu Gly Leu Leu Leu Leu Leu Pro Leu Ala Gly
 1              5              10              15

His Leu Ala Leu Gly Ala Gln Gln Gly Arg Gly Arg Arg Glu Leu Ala
      20              25              30

Pro Gly Leu His Leu Arg Gly Ile Arg Asp Ala Gly Gly Arg Tyr Cys
 35              40              45
```

Gln Glu Gln Asp Leu Cys Cys Arg Gly Arg Ala Asp Asp Cys Ala Leu
 50 55 60
 Pro Tyr Leu Gly Ala Ile Cys Tyr Cys Asp Leu Phe Cys Asn Arg Thr
 65 70 75 80
 Val Ser Asp Cys Cys Pro Asp Phe Trp Asp Phe Cys Leu Gly Val Pro
 85 90 95
 Pro Pro Phe Pro Pro Ile Gln Gly Cys Met His Gly Gly Arg Ile Tyr
 100 105 110
 Pro Val Leu Gly Thr Tyr Trp Asp Asn Cys Asn Arg Cys Thr Cys Gln
 115 120 125
 Glu Asn Arg Gln Trp His Gly Gly Ser Arg His Asp Gln Ser His Gln
 130 135 140
 Pro Gly Gln Leu Trp Leu Ala Gly Trp Glu Pro Gln Arg Leu Leu Gly
 145 150 155 160
 His Asp Pro Gly

<210> 13
 <211> 533
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> (33)..(33)
 <223> a, t, c or g

<220>
 <221> modified_base
 <222> (37)..(37)
 <223> a, t, c or g

<220>
 <221> modified_base
 <222> (80)..(80)
 <223> a, t, c or g

<220>
 <221> modified_base
 <222> (94)..(94)
 <223> a, t, c or g

<220>
 <221> modified_base
 <222> (144)..(144)
 <223> a, t, c or g

<220>
 <221> modified_base
 <222> (188)..(188)

<223> a, t, c or g

<400> 13

```
aggctccttg gccctttttc cacagcaagc ttntgenatc ccgattcgtt gtctcaaata 60
caattctctt gggacacatn acgcctgtcc tttngeccca gaacctgctg tcttgtaac 120
ccaccagcag cagggctgcc gcgntgggcg tctcgatggg gcctgggtgg tcctgcgtcg 180
ccgagggntg gtgtctgacc actgctaccc cttctcgggc cgtgaacgag acgaggctgg 240
ccctgcgccc ccctgtatga tgcacagccg agccatgggt cggggcaagc gccaggccac 300
tgcccactgc cccaacagct atgttaataa caatgacatc taccaggtca ctctgtcta 360
ccgcctcggc tccaacgaca aggagatcat gaaggagctg atggagaatg gccctgtcca 420
agccctcatg gaggtgcatg aggacttctt cctatacaag ggaggcatct acagccacac 480
gccagtgagc cttgggaggc cagagagata ccgccggcat gggacccact cag 533
```

<210> 14

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 14

```
ttcgaggcct ctgagaagtg gccc 24
```

<210> 15

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 15

```
ggcggtatct ctctggcctc cc 22
```

<210> 16

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 16

```
ttctccacag cagctgtggc atccgatcgt gtctcaatcc attctctggg 50
```

<210> 17

<211> 960

<212> DNA

<213> Homo sapiens

<400> 17

```
gctgcttgcc ctgttgatgg caggcttggc cctgcagcca ggcactgccc tgctgtgcta 60
ctctgcaaaa gccagggtga gcaacgagga ctgcctgcag gtggagaact gcacccagct 120
```

```

gggggagcag tgctggaccg cgcgcacccg cgcagttggc ctctgaccg tcatcagcaa 180
aggctgcagc ttgaactgcg tggatgactc acaggactac tacgtgggca agaagaacat 240
cacgtgctgt gacaccgact tgtgcaacgc cagcggggcc catgccctgc agccggctgc 300
cgccatcctt gcgctgctcc ctgcactcgg cctgctgctc tggggaccg gccagctata 360
ggctctgggg ggccccgctg cagcccacac tgggtgtggt gccccaggcc tctgtgccac 420
tcctcacaga cctggcccag tgggagcctg tcctggttcc tgaggcacat cctaacgcaa 480
gtctgaccat gtatgtctgc acccctgtcc cccaccctga ccctcccatg gccctctcca 540
ggactcccac ccggcagatc agctctagt acacagatcc gcctgcagat ggccccctcca 600
accctctctg ctgctgtttc catggcccag cattctccac ccttaaccct gtgtcaggc 660
acctcttccc ccaggaagcc ttccctgccc accccatcta tgacttgagc caggtctggt 720
ccgtggtgtc ccccgacccc agcaggggac aggcactcag gagggcccag taaaggctga 780
gatgaagtgg actgagtaga actggaggac aagagtcgac gtgagttcct gggagtctcc 840
agagatgggg cctggaggcc tggaggaagg ggccaggcct cacattcgtg gggctccctg 900
aatggcagcc tgagcacagc gtaggcctt aataaacacc tgttggataa gccaaaaaaa 960

```

<210> 18
 <211> 189
 <212> PRT
 <213> Homo sapiens

```

<400> 18
Met Thr His Arg Thr Thr Thr Trp Ala Arg Arg Thr Ser Arg Ala Val
  1              5              10              15

Thr Pro Thr Cys Ala Thr Pro Ala Gly Pro Met Pro Cys Ser Arg Leu
          20              25              30

Pro Pro Ser Leu Arg Cys Ser Leu His Ser Ala Cys Cys Ser Gly Asp
      35              40              45

Pro Ala Ser Tyr Arg Leu Trp Gly Ala Pro Leu Gln Pro Thr Leu Gly
  50              55              60

Val Val Pro Gln Ala Ser Val Pro Leu Leu Thr Asp Leu Ala Gln Trp
  65              70              75              80

Glu Pro Val Leu Val Pro Glu Ala His Pro Asn Ala Ser Leu Thr Met
          85              90              95

Tyr Val Cys Thr Pro Val Pro His Pro Asp Pro Pro Met Ala Leu Ser
      100              105              110

Arg Thr Pro Thr Arg Gln Ile Ser Ser Ser Asp Thr Asp Pro Pro Ala
      115              120              125

Asp Gly Pro Ser Asn Pro Leu Cys Cys Cys Phe His Gly Pro Ala Phe
      130              135              140

Ser Thr Leu Asn Pro Val Leu Arg His Leu Phe Pro Gln Glu Ala Phe
      145              150              155              160

Pro Ala His Pro Ile Tyr Asp Leu Ser Gln Val Trp Ser Val Val Ser
          165              170              175

Pro Ala Pro Ser Arg Gly Gln Ala Leu Arg Arg Ala Gln
      180              185

```

<210> 19
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 19
tgctgtgcta ctcctgcaaa gccc 24

<210> 20
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 20
tgcacaagtc ggtgtcacag cacg 24

<210> 21
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 21
agcaacgagg actgcctgca ggtggagaac tgcacccagc tggg 44

<210> 22
<211> 1200
<212> DNA
<213> Homo sapiens

<400> 22
cccacgcgtc cgaacctctc cagcgatggg agccgcccgc ctgctgccc aacctactct 60
gtgcttacag ctgctgattc tctgctgtca aactcagtac gtgagggacc agggcgccat 120
gaccgaccag ctgagcaggc ggcagatccg cgagtaccaa ctctacagca ggaccagtgg 180
caagcacgtg caggtcacccg ggcgtcgcat ctccgccacc gccgaggacg gcaacaagtt 240
tgccaagctc atagtggaga cggacacgtt tggcagccgg gttcgcatca aaggggctga 300
gagtgagaag tacatctgta tgaacaagag gggcaagtc atcgggaagc ccagcgggaa 360
gagcaaagac tgcgtgttca cggagatcgt gctggagaac aactatacgg ccttcagaa 420
cgcccggcac gagggctggt tcatggcctt cagcggcag gggcgcccc gccaggcttc 480
ccgcagccgc cagaaccagc gcgaggccca cttcatcaag cgcctctacc aaggccagct 540
gcccctcccc aaccacgccc agaagcagaa gcagttcgag tttgtgggct ccgccccac 600
ccgcgggacc aagcgcacac ggcgccccca gcccctcacg tagtctggga ggcagggggc 660
agcagccccct ggccgcctc cccaccctt tcccttctta atccaaggac tgggctgggg 720
tgccgggagg ggagccagat ccccaggga ggaccctgag ggccgcgaag catccagacc 780
cccagctggg aaggggcagg ccggtgcccc agggcgggct ggcacagtgc ccccttccc 840
gacgggtggc aggccctgga gaggaactga gtgtcaccct gatctcaggc caccagcctc 900

tgccggcctc ccagccgggc tctgaagcc cgctgaaagg tcagcgactg aaggccttgc 960
 agacaaccgt ctggagggtg ctgtcctcaa aatctgcttc tcggatctcc ctcagtctgc 1020
 cccagcccc caaactcctc ctggctagac tgtaggaagg gacttttggt tgtttgttg 1080
 tttcaggaaa aaagaaaggg agagagagga aaatagaggg ttgtccactc ctcacattcc 1140
 acgaccagg cctgcacccc accccaact cccagccccg gaataaaacc attttcctgc 1200

<210> 23
 <211> 205
 <212> PRT
 <213> Homo sapiens

<400> 23
 Met Gly Ala Ala Arg Leu Leu Pro Asn Leu Thr Leu Cys Leu Gln Leu
 1 5 10 15
 Leu Ile Leu Cys Cys Gln Thr Gln Tyr Val Arg Asp Gln Gly Ala Met
 20 25 30
 Thr Asp Gln Leu Ser Arg Arg Gln Ile Arg Glu Tyr Gln Leu Tyr Ser
 35 40 45
 Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg Arg Ile Ser Ala
 50 55 60
 Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu Ile Val Glu Thr Asp
 65 70 75 80
 Thr Phe Gly Ser Arg Val Arg Ile Lys Gly Ala Glu Ser Glu Lys Tyr
 85 90 95
 Ile Cys Met Asn Lys Arg Gly Lys Leu Ile Gly Lys Pro Ser Gly Lys
 100 105 110
 Ser Lys Asp Cys Val Phe Thr Glu Ile Val Leu Glu Asn Asn Tyr Thr
 115 120 125
 Ala Phe Gln Asn Ala Arg His Glu Gly Trp Phe Met Ala Phe Thr Arg
 130 135 140
 Gln Gly Arg Pro Arg Gln Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu
 145 150 155 160
 Ala His Phe Ile Lys Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn
 165 170 175
 His Ala Glu Lys Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr
 180 185 190
 Arg Arg Thr Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
 195 200 205

<210> 24
 <211> 28
 <212> DNA
 <213> Artificial Sequence
 <220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 24
cagtacgtga gggaccaggg cgccatga

28

<210> 25
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 25
ccggtgacct gcacgtgctt gcca

24

<210> 26
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<220>
<221> modified_base
<222> (21)..(21)
<223> a, t, c or g

<400> 26
gcggatctgc cgectgctca nctggctcggg catggcgccc t

41

<210> 27
<211> 2479
<212> DNA
<213> Homo sapiens

<400> 27
acttgccatc acctgttgcc agtgtggaaa aattctccct gttgaatttt ttgcacatgg 60
aggacagcag caaagagggc aacacaggct gataagacca gagacagcag ggagattatt 120
ttaccatacg ccttcaggac gttccctcta gctggagttc tggacttcaa cagaacccca 180
tccagtcatt ttgattttgc tgtttatttt ttttttcttt ttctttttcc caccacattg 240
tatttttattt ccgtacttca gaaatggggc tacagaccac aaagtggccc agccatgggg 300
ctttttttcct gaagtcttgg cttatcattt ccctggggct ctactcacag gtgtccaaac 360
tcctggcctg ccctagtgtg tgccgctgcg acaggaactt tgtctactgt aatgagcgaa 420
gcttgacctc agtgcctctt gggatcccgg agggcgtaac cgtactctac ctccacaaca 480
accaaattaa taatgctgga tttcctgcag aactgcacaa tgtacagtcg gtgcacacgg 540
tctacctgta tggcaaccaa ctggacgaat tccccatgaa ccttcccaag aatgtcagag 600
ttctccattt gcaggaaaac aatattcaga ccatttcacg ggctgctctt gccagctct 660
tgaagcttga agagctgcac ctggatgaca actccatata cacagtgggg gtggaagacg 720
gggccttccg ggaggctatt agcctcaaat tgttgTTTTT gtctaagaat cacctgagca 780
gtgtgcctgt tgggcttccct gtggacttgc aagagctgag agtggatgaa aatcgaattg 840
ctgtcatatc cgacatggcc ttccagaatc tcacgagctt ggagcgtctt attgtggacg 900
ggaacctcct gaccaacaag ggtatcgccg agggcacctt cagccatctc accaagctca 960

```

aggaattttc aattgtacgt aattcgctgt cccaccctcc tcccgatctc ccaggtaacgc 1020
atctgatcag gctctatttg caggacaacc agataaacca cattcctttg acagccttct 1080
caaatctgcg taagctggaa cggctggata tatccaacaa ccaactgcgg atgctgactc 1140
aaggggtttt tgataatctc tccaacctga agcagctcac tgctcggaat aacccttggt 1200
tttgtgactg cagtattaaa tgggtcacag aatggctcaa atatatccct tcatctctca 1260
acgtgcgggg tttcatgtgc caaggtcctg aacaagtccg ggggatggcc gtcagggaat 1320
taaatatgaa tcttttgtcc tgtcccacca cgacccccgg cctgcctctc ttcaccccag 1380
ccccaagtac agcttctccg accactcagc ctcccacct ctctattcca aaccctagca 1440
gaagctacac gcctccaact cctaccacat cgaaacttcc cagcattcct gactgggatg 1500
gcagagaaag agtgacccca cctatttctg aacggatcca gctctctatc cattttgtga 1560
atgatacttc cattcaagtc agctggctct ctctcttcac cgtgatggca taaaaactca 1620
catgggtgaa aatgggccac agtttagtag ggggcatcgt tcaggagcgc atagtcagcg 1680
gtgagaagca acacctgagc ctggttaact tagagccccg atccacctat cggatttggt 1740
tagtgccact ggatgctttt aactaccgcg cggtagaaga caccatttgt tcaggagcca 1800
ccacccatgc ctctatctg aacaacggca gcaacacagc gtccagccat gagcagacga 1860
cgtcccacag catgggctcc ccttttctgc tggcgggctt gatcgggggc gcggtgatat 1920
ttgtgtggtt ggtcttgctc agcgtctttt gctggcatat gcacaaaaag gggcgctaca 1980
cctcccagaa gtggaaatac aaccggggcc ggcgaaaaga tgattattgc gaggcaggca 2040
ccaagaagga caactccatc ctggagatga cagaaaccag ttttcagatc gtctccttaa 2100
ataacgatca actccttaaa ggagatttca gactgcagcc catttacacc ccaaattggg 2160
gcattaatta cacagactgc catatcccca acaacatgcg atactgcaac agcagcgtgc 2220
cagacctgga gcaactgcat acgtgacagc cagaggccca gcgttatcaa ggcgacaat 2280
tagactcttg agaacacact cgtgtgtgca cataaagaca cgcagattac atttgataaa 2340
tgttacacag atgcatttgt gcatttgaat actctgtaat ttatacggtg tactatataa 2400
tgggatttaa aaaaagtgtc atcttttcta tttcaagtta attacaaaca gttttgtaac 2460
tctttgcttt ttaaattctt                                     2479

```

<210> 28
 <211> 660
 <212> PRT
 <213> Homo sapiens

```

<400> 28
Met Gly Leu Gln Thr Thr Lys Trp Pro Ser His Gly Ala Phe Phe Leu
 1                      5                      10                      15

Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val Ser Lys
 20                      25                      30

Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr
 35                      40                      45

Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly
 50                      55                      60

Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
 65                      70                      75                      80

Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr
 85                      90                      95

Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg
 100                     105                     110

Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala
 115                     120                     125

```

Leu	Ala	Gln	Leu	Leu	Lys	Leu	Glu	Glu	Leu	His	Leu	Asp	Asp	Asn	Ser	130	135	140
Ile	Ser	Thr	Val	Gly	Val	Glu	Asp	Gly	Ala	Phe	Arg	Glu	Ala	Ile	Ser	145	150	155
Leu	Lys	Leu	Leu	Phe	Leu	Ser	Lys	Asn	His	Leu	Ser	Ser	Val	Pro	Val	165	170	175
Gly	Leu	Pro	Val	Asp	Leu	Gln	Glu	Leu	Arg	Val	Asp	Glu	Asn	Arg	Ile	180	185	190
Ala	Val	Ile	Ser	Asp	Met	Ala	Phe	Gln	Asn	Leu	Thr	Ser	Leu	Glu	Arg	195	200	205
Leu	Ile	Val	Asp	Gly	Asn	Leu	Leu	Thr	Asn	Lys	Gly	Ile	Ala	Glu	Gly	210	215	220
Thr	Phe	Ser	His	Leu	Thr	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Val	Arg	Asn	225	230	235
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile	Arg	245	250	255
Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr	Ala	Phe	260	265	270
Ser	Asn	Leu	Arg	Lys	Leu	Glu	Arg	Leu	Asp	Ile	Ser	Asn	Asn	Gln	Leu	275	280	285
Arg	Met	Leu	Thr	Gln	Gly	Val	Phe	Asp	Asn	Leu	Ser	Asn	Leu	Lys	Gln	290	295	300
Leu	Thr	Ala	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Asp	Cys	Ser	Ile	Lys	Trp	305	310	315
Val	Thr	Glu	Trp	Leu	Lys	Tyr	Ile	Pro	Ser	Ser	Leu	Asn	Val	Arg	Gly	325	330	335
Phe	Met	Cys	Gln	Gly	Pro	Glu	Gln	Val	Arg	Gly	Met	Ala	Val	Arg	Glu	340	345	350
Leu	Asn	Met	Asn	Leu	Leu	Ser	Cys	Pro	Thr	Thr	Thr	Pro	Gly	Leu	Pro	355	360	365
Leu	Phe	Thr	Pro	Ala	Pro	Ser	Thr	Ala	Ser	Pro	Thr	Thr	Gln	Pro	Pro	370	375	380
Thr	Leu	Ser	Ile	Pro	Asn	Pro	Ser	Arg	Ser	Tyr	Thr	Pro	Pro	Thr	Pro	385	390	395
Thr	Thr	Ser	Lys	Leu	Pro	Thr	Ile	Pro	Asp	Trp	Asp	Gly	Arg	Glu	Arg	405	410	415
Val	Thr	Pro	Pro	Ile	Ser	Glu	Arg	Ile	Gln	Leu	Ser	Ile	His	Phe	Val	420	425	430

Asn Asp Thr Ser Ile Gln Val Ser Trp Leu Ser Leu Phe Thr Val Met
 435 440 445
 Ala Tyr Lys Leu Thr Trp Val Lys Met Gly His Ser Leu Val Gly Gly
 450 455 460
 Ile Val Gln Glu Arg Ile Val Ser Gly Glu Lys Gln His Leu Ser Leu
 465 470 475 480
 Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg Ile Cys Leu Val Pro Leu
 485 490 495
 Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp Thr Ile Cys Ser Glu Ala
 500 505 510
 Thr Thr His Ala Ser Tyr Leu Asn Asn Gly Ser Asn Thr Ala Ser Ser
 515 520 525
 His Glu Gln Thr Thr Ser His Ser Met Gly Ser Pro Phe Leu Leu Ala
 530 535 540
 Gly Leu Ile Gly Gly Ala Val Ile Phe Val Leu Val Val Leu Leu Ser
 545 550 555 560
 Val Phe Cys Trp His Met His Lys Lys Gly Arg Tyr Thr Ser Gln Lys
 565 570 575
 Trp Lys Tyr Asn Arg Gly Arg Arg Lys Asp Asp Tyr Cys Glu Ala Gly
 580 585 590
 Thr Lys Lys Asp Asn Ser Ile Leu Glu Met Thr Glu Thr Ser Phe Gln
 595 600 605
 Ile Val Ser Leu Asn Asn Asp Gln Leu Leu Lys Gly Asp Phe Arg Leu
 610 615 620
 Gln Pro Ile Tyr Thr Pro Asn Gly Gly Ile Asn Tyr Thr Asp Cys His
 625 630 635 640
 Ile Pro Asn Asn Met Arg Tyr Cys Asn Ser Ser Val Pro Asp Leu Glu
 645 650 655
 His Cys His Thr
 660

<210> 29

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 29

cggtctacct gtatggcaac c

<210> 30
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 30
gcaggacaac cagataaacc ac 22

<210> 31
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 31
acgcagattt gagaaggctg tc 22

<210> 32
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 32
ttcacgggct gctcttgccc agctcttgaa gcttgaagag ctgcac 46

<210> 33
<211> 3449
<212> DNA
<213> Homo sapiens

<400> 33
acttgagca agcggcggcg gcggagacag aggcagaggc agaagctggg gctccgtcct 60
cgectccac gagcgatccc cgaggagagc cgcggccctc ggcgaggcga agaggccgac 120
gaggaagacc cgggtggctg cgcccctgcc tgccttccca ggcgcggcg gctgcagcct 180
tgcccctctt gctcgccttg aaaatggaaa agatgctcgc aggtgcttt ctgctgatcc 240
tcggacagat cgtcctcctc cctgccgagg ccagggagcg gtcacgtggg aggtccatct 300
ctaggggcag acacgctcgg acccaccgc agacggccct tctggagagt tctgtgaga 360
acaagcgggc agacctggtt ttcattcattg acagctctcg cagtgtcaac acccatgact 420
atgcaaaggt caaggagttc atcgtggaca tcttgcaatt cttggacatt ggctcctgatg 480
tcacccgagt gggcctgctc caatatggca gcaactgtcaa gaatgagttc tccctcaaga 540
ccttcaagag gaagtccgag gtggagcgtg ctgtcaagag gatgcggcat ctgtccacgg 600
gcaccatgac tgggctggcc atccagtatg ccctgaacat cgcattctca gaagcagagg 660
gggcccggcc cctgagggag aatgtgccac gggtcataat gatcgtgaca gatgggagac 720
ctcaggactc cgtggccgag gtggctgcta aggcacggga cacgggcac ctaatctttg 780
ccattggtgt gggccaggta gacttcaaca ccttgaagtc cattgggagt gagcccatg 840
aggaccatgt ctctcttggtg gccaatattca gccagattga gacgctgacc tccgtgttcc 900

```

agaagaagtt gtgcacggcc cacatgtgca gcaccctgga gcataactgt gccactttct 960
gcatcaacat ccctggctca tacgtctgca ggtgcaaaca aggctacatt ctcaactcgg 1020
atcagacgac ttgcagaatc caggatctgt gtgccatgga ggaccacaac tgtgagcagc 1080
tctgtgtgaa tgtgccgggc tccttcgtct gccagtgtca cagtgggtac gccctggctg 1140
aggatgggaa gaggtgtgtg gctgtggact actgtgcctc agaaaaccac ggatgtgaac 1200
atgagtgtgt aaatgctgat ggctcctacc ttgcccagtg ccatgaagga ttgtctctta 1260
accagatga aaaaacgtgc acaaggatca actactgtgc actgaacaaa ccgggctgtg 1320
agcatgagtg cgtcaacatg gaggagagct actactgccg ctgccaccgt ggctacactc 1380
tggaccccaa tggcaaaacc tgcagccgag tggaccactg tgcacagcag gaccatggct 1440
gtgagcagct gtgtctgaac acggaggatt ccttcgtctg ccagtgtctc gaaggcttcc 1500
tcatcaacga ggacctcaag acctgctccc ggggtggatta ctgcctgctg agtgaccatg 1560
gttgtgaata ctctgtgtc aacatggaca gatcctttgc ctgtcagtggt cctgaggggac 1620
acgtgctccg cagcgatggg aagacgtgtg caaaattgga ctcttgtgct ctgggggacc 1680
acggttgtga acattcgtgt gtaagcagtg aagattcgtt tgtgtgccag tgctttgaag 1740
gttatatact ccgtgaagat ggaaaaacct gcagaaggaa agatgtctgc caagctatag 1800
accatggctg tgaacacatt tgtgtgaaca gtgacgactc atacacgtgc gagtgccttg 1860
agggattccg gctcgctgag gatgggaaac gctgccgaag gaaggatgtc tgcaaatcaa 1920
cccaccatgg ctgcgaacac atttgtgtta ataattggaa ttctacatc tgcaaatgct 1980
cagagggagt tgttctagct gaggacggaa gacggtgcaa gaaatgcact gaaggcccaa 2040
ttgacctggt ctttgtgatc gatggatcca agagtcttgg agaagagaat tttaggtcg 2100
tgaagcagtt tgtcactgga attatagatt ccttgacaat ttcccccaa gccgctcgag 2160
tggggctgct ccagtattcc acacaggtcc acacagagtt cactctgaga aacttcaact 2220
cagccaaaga catgaaaaaa gccgtggccc acatgaaata catgggaaag ggctctatga 2280
ctgggctggc cctgaaacac atgtttgaga gaagttttac ccaaggagaa gggggccaggc 2340
ccctttccac aagggtgcc agagcagcca ttgtgttcac cgacggacgg gctcaggatg 2400
acgtctccga gtgggccagt aaagccaagg ccaatggtat cactatgtat gctgttgggg 2460
taggaaaagc cattgaggag gaactacaag agattgcctc tgagcccaca aacaagcatc 2520
tcttctatgc cgaagacttc agcacaatgg atgagataag tgaaaaactc aagaaaggca 2580
tctgtgaagc tctagaagac tccgatggaa gacaggactc tccagcaggg gaactgccaa 2640
aaacggtcca acagccaaca gaatctgagc cagtcacatc aaatatccaa gacctacttt 2700
cctgttctaa ttttgcaagt caacacagat atctgtttga agaagacaat cttttacggt 2760
ctacacaaaa gctttcccat tcaacaaaaa cttcaggaag ccctttggaa gaaaaacacg 2820
atcaatgcaa atgtgaaaac cttataatgt tccagaacct tgcaaacgaa gaagtaagaa 2880
aattaacaca gcgcttagaa gaaatgacac agagaatgga agccctggaa aatcgctga 2940
gatacagatg aggattagaa atcgcgacac atttgtagtc attgtatcac ggattacaat 3000
gaacgcagtg cagagcccca aagctcaggc tattgttaaa tcaataatgt tgtgaagtaa 3060
aacaatcagt actgagaaac ctggtttgcc acagaacaaa gacaagaagt atacactaac 3120
ttgtataaat ttatctagga aaaaaatcct tcagaattct aagatgaatt taccagggtga 3180
gaatgaataa gctatgcaag gtattttgta atatactgtg gacacaactt gcttctgcct 3240
catcctgcct tagtgtgcaa tctcatttga ctatacgata aagtttgcac agtcttactt 3300
ctgtagaaca ctggccatag gaaatgctgt tttttgtac tggactttac cttgatatat 3360
gtatatggat gtatgcataa aatcatagga catatgtact tgtggaacaa gttggatttt 3420
ttatacaata ttaaaattca ccacttcag 3449

```

<210> 34
 <211> 915
 <212> PRT
 <213> Homo sapiens

<400> 34
 Met Glu Lys Met Leu Ala Gly Cys Phe Leu Leu Ile Leu Gly Gln Ile
 1 5 10 15
 Val Leu Leu Pro Ala Glu Ala Arg Glu Arg Ser Arg Gly Arg Ser Ile
 20 25 30
 Ser Arg Gly Arg His Ala Arg Thr His Pro Gln Thr Ala Leu Leu Glu

35	40	45																	
Ser	Ser	Cys	Glu	Asn	Lys	Arg	Ala	Asp	Leu	Val	Phe	Ile	Ile	Asp	Ser				
50						55					60								
Ser	Arg	Ser	Val	Asn	Thr	His	Asp	Tyr	Ala	Lys	Val	Lys	Glu	Phe	Ile				
65					70					75					80				
Val	Asp	Ile	Leu	Gln	Phe	Leu	Asp	Ile	Gly	Pro	Asp	Val	Thr	Arg	Val				
				85					90					95					
Gly	Leu	Leu	Gln	Tyr	Gly	Ser	Thr	Val	Lys	Asn	Glu	Phe	Ser	Leu	Lys				
			100					105					110						
Thr	Phe	Lys	Arg	Lys	Ser	Glu	Val	Glu	Arg	Ala	Val	Lys	Arg	Met	Arg				
		115					120					125							
His	Leu	Ser	Thr	Gly	Thr	Met	Thr	Gly	Leu	Ala	Ile	Gln	Tyr	Ala	Leu				
130						135					140								
Asn	Ile	Ala	Phe	Ser	Glu	Ala	Glu	Gly	Ala	Arg	Pro	Leu	Arg	Glu	Asn				
145					150					155					160				
Val	Pro	Arg	Val	Ile	Met	Ile	Val	Thr	Asp	Gly	Arg	Pro	Gln	Asp	Ser				
				165					170					175					
Val	Ala	Glu	Val	Ala	Ala	Lys	Ala	Arg	Asp	Thr	Gly	Ile	Leu	Ile	Phe				
			180					185					190						
Ala	Ile	Gly	Val	Gly	Gln	Val	Asp	Phe	Asn	Thr	Leu	Lys	Ser	Ile	Gly				
		195					200					205							
Ser	Glu	Pro	His	Glu	Asp	His	Val	Phe	Leu	Val	Ala	Asn	Phe	Ser	Gln				
210						215					220								
Ile	Glu	Thr	Leu	Thr	Ser	Val	Phe	Gln	Lys	Lys	Leu	Cys	Thr	Ala	His				
225					230					235					240				
Met	Cys	Ser	Thr	Leu	Glu	His	Asn	Cys	Ala	His	Phe	Cys	Ile	Asn	Ile				
				245					250					255					
Pro	Gly	Ser	Tyr	Val	Cys	Arg	Cys	Lys	Gln	Gly	Tyr	Ile	Leu	Asn	Ser				
			260					265					270						
Asp	Gln	Thr	Thr	Cys	Arg	Ile	Gln	Asp	Leu	Cys	Ala	Met	Glu	Asp	His				
		275					280					285							
Asn	Cys	Glu	Gln	Leu	Cys	Val	Asn	Val	Pro	Gly	Ser	Phe	Val	Cys	Gln				
		290				295					300								
Cys	Tyr	Ser	Gly	Tyr	Ala	Leu	Ala	Glu	Asp	Gly	Lys	Arg	Cys	Val	Ala				
305					310					315					320				
Val	Asp	Tyr	Cys	Ala	Ser	Glu	Asn	His	Gly	Cys	Glu	His	Glu	Cys	Val				
				325					330					335					
Asn	Ala	Asp	Gly	Ser	Tyr	Leu	Cys	Gln	Cys	His	Glu	Gly	Phe	Ala	Leu				

340	345	350
Asn Pro Asp Glu Lys Thr Cys Thr Arg Ile Asn Tyr Cys Ala Leu Asn 355 360 365		
Lys Pro Gly Cys Glu His Glu Cys Val Asn Met Glu Glu Ser Tyr Tyr 370 375 380		
Cys Arg Cys His Arg Gly Tyr Thr Leu Asp Pro Asn Gly Lys Thr Cys 385 390 395 400		
Ser Arg Val Asp His Cys Ala Gln Gln Asp His Gly Cys Glu Gln Leu 405 410 415		
Cys Leu Asn Thr Glu Asp Ser Phe Val Cys Gln Cys Ser Glu Gly Phe 420 425 430		
Leu Ile Asn Glu Asp Leu Lys Thr Cys Ser Arg Val Asp Tyr Cys Leu 435 440 445		
Leu Ser Asp His Gly Cys Glu Tyr Ser Cys Val Asn Met Asp Arg Ser 450 455 460		
Phe Ala Cys Gln Cys Pro Glu Gly His Val Leu Arg Ser Asp Gly Lys 465 470 475 480		
Thr Cys Ala Lys Leu Asp Ser Cys Ala Leu Gly Asp His Gly Cys Glu 485 490 495		
His Ser Cys Val Ser Ser Glu Asp Ser Phe Val Cys Gln Cys Phe Glu 500 505 510		
Gly Tyr Ile Leu Arg Glu Asp Gly Lys Thr Cys Arg Arg Lys Asp Val 515 520 525		
Cys Gln Ala Ile Asp His Gly Cys Glu His Ile Cys Val Asn Ser Asp 530 535 540		
Asp Ser Tyr Thr Cys Glu Cys Leu Glu Gly Phe Arg Leu Ala Glu Asp 545 550 555 560		
Gly Lys Arg Cys Arg Arg Lys Asp Val Cys Lys Ser Thr His His Gly 565 570 575		
Cys Glu His Ile Cys Val Asn Asn Gly Asn Ser Tyr Ile Cys Lys Cys 580 585 590		
Ser Glu Gly Phe Val Leu Ala Glu Asp Gly Arg Arg Cys Lys Lys Cys 595 600 605		
Thr Glu Gly Pro Ile Asp Leu Val Phe Val Ile Asp Gly Ser Lys Ser 610 615 620		
Leu Gly Glu Glu Asn Phe Glu Val Val Lys Gln Phe Val Thr Gly Ile 625 630 635 640		
Ile Asp Ser Leu Thr Ile Ser Pro Lys Ala Ala Arg Val Gly Leu Leu		

645					650					655					
Gln	Tyr	Ser	Thr	Gln	Val	His	Thr	Glu	Phe	Thr	Leu	Arg	Asn	Phe	Asn
			660					665					670		
Ser	Ala	Lys	Asp	Met	Lys	Lys	Ala	Val	Ala	His	Met	Lys	Tyr	Met	Gly
		675					680					685			
Lys	Gly	Ser	Met	Thr	Gly	Leu	Ala	Leu	Lys	His	Met	Phe	Glu	Arg	Ser
	690					695					700				
Phe	Thr	Gln	Gly	Glu	Gly	Ala	Arg	Pro	Leu	Ser	Thr	Arg	Val	Pro	Arg
705				710						715					720
Ala	Ala	Ile	Val	Phe	Thr	Asp	Gly	Arg	Ala	Gln	Asp	Asp	Val	Ser	Glu
				725					730					735	
Trp	Ala	Ser	Lys	Ala	Lys	Ala	Asn	Gly	Ile	Thr	Met	Tyr	Ala	Val	Gly
			740					745					750		
Val	Gly	Lys	Ala	Ile	Glu	Glu	Glu	Leu	Gln	Glu	Ile	Ala	Ser	Glu	Pro
		755					760					765			
Thr	Asn	Lys	His	Leu	Phe	Tyr	Ala	Glu	Asp	Phe	Ser	Thr	Met	Asp	Glu
	770					775					780				
Ile	Ser	Glu	Lys	Leu	Lys	Lys	Gly	Ile	Cys	Glu	Ala	Leu	Glu	Asp	Ser
785				790					795						800
Asp	Gly	Arg	Gln	Asp	Ser	Pro	Ala	Gly	Glu	Leu	Pro	Lys	Thr	Val	Gln
				805					810					815	
Gln	Pro	Thr	Glu	Ser	Glu	Pro	Val	Thr	Ile	Asn	Ile	Gln	Asp	Leu	Leu
			820					825					830		
Ser	Cys	Ser	Asn	Phe	Ala	Val	Gln	His	Arg	Tyr	Leu	Phe	Glu	Glu	Asp
		835					840					845			
Asn	Leu	Leu	Arg	Ser	Thr	Gln	Lys	Leu	Ser	His	Ser	Thr	Lys	Pro	Ser
	850					855					860				
Gly	Ser	Pro	Leu	Glu	Glu	Lys	His	Asp	Gln	Cys	Lys	Cys	Glu	Asn	Leu
865				870					875					880	
Ile	Met	Phe	Gln	Asn	Leu	Ala	Asn	Glu	Glu	Val	Arg	Lys	Leu	Thr	Gln
			885					890						895	
Arg	Leu	Glu	Glu	Met	Thr	Gln	Arg	Met	Glu	Ala	Leu	Glu	Asn	Arg	Leu
			900					905					910		
Arg	Tyr	Arg													
			915												

<210> 35
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 35

gtgaccctgg ttgtgaatac tcc

23

<210> 36

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 36

acagccatgg tctatagctt gg

22

<210> 37

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 37

gcctgtcagt gtccctgaggg acacgtgctc cgcagcgatg ggaag

45

<210> 38

<211> 1813

<212> DNA

<213> Homo sapiens

<400> 38

ggagccgccc tgggtgtcag cggctcggct cccgcgcacg ctccggccgt cgcgcagcct 60
cggcacctgc aggtccgtgc gtcccgcggc tggcgcccct gactccgtcc cggccaggga 120
gggccatgat ttccctcccg gggcccctgg tgaccaactt gctgcggttt ttgttcctgg 180
ggctgagtgc cctcgcgccc ccctcgcggg cccagctgca actgcacttg cccgccaacc 240
ggttgaggc ggtggaggga ggggaagtgg tgcttcacg gtggtacacc ttgcacgggg 300
aggtgtcttc atcccagcca tgggaggtgc cttttgtgat gtggttcttc aaacagaaaag 360
aaaaggagga tcaggtgttg tctacatca atggggtcac aacaagcaaa cctggagtat 420
ccttggtcta ctccatgcc tcccggaacc tgtccctgcg gctggagggt ctccaggaga 480
aagactctgg ccctacagc tgctccgtga atgtgcaaga caaacaaggc aaatctaggg 540
gccacagcat caaaacctta gaactcaatg tactggttcc tccagctcct ccacctgcc 600
gtctccaggg tgtgccccat gtgggggcaa acgtgaccct gagctgccag tctccaagga 660
gtaagccgc tgtccaatac cagtgggatc ggcagcttcc atccttccag actttctttg 720
caccagcatt agatgtcatc cgtgggtctt taagcctcac caaccttctg tcttccatgg 780
ctggagtcta tgtctgcaag gccacaatg aggtgggcac tgcccaatgt aatgtgacgc 840
tggaagtgag cacagggcct ggagctgcag tggttgctgg agctgttgtg ggtaccctgg 900
ttggactggg gttgctggct gggctggctc tcttgtagca ccgcccggggc aaggccctgg 960
aggagccagc caatgatata aaggaggatg ccattgctcc ccggaccctg ccctggccca 1020
agagctcaga cacaatctcc aagaatggga ccctttcttc tgtcacctcc gcacgagccc 1080
tccggccacc ccatggccct cccaggcctg gtgcattgac cccacgccc agtctctcca 1140

```

gccaggccct gccctcacca agactgccc cgacagatgg ggcccaccct caaccaatat 1200
cccccatccc tgggtggggtt tcttcctctg gcttgagccg catgggtgct gtgcctgtga 1260
tggtgccctgc ccagagtcaa gctggctctc tggatatgat accccaccac tcattggcta 1320
aaggatttgg ggtctctcct tcctataagg gtcacctcta gcacagaggc ctgagtcatg 1380
ggaaagagtc acactcctga cccttagtac tctgccccca cctctcttta ctgtgggaaa 1440
accatctcag taagacctaa gtgtccagga gacagaagga gaagaggaag tggatctgga 1500
attgggagga gcctccaccc acccctgact cctccttatg aagccagctg ctgaaattag 1560
ctactcacca agagtgaggg gcagagactt ccagtcactg agtctcccag gcccccttga 1620
tctgtacccc acccctatct aacaccaccc ttggctccca ctccagctcc ctgtattgat 1680
ataacctgtc aggtctggctt ggttagggtt tactggggca gaggataggg aatctcttat 1740
taaaactaac atgaaatatg tgttggtttc atttgcaaat ttaaataaag atacataatg 1800
tttgtatgaa aaa 1813

```

<210> 39
 <211> 390
 <212> PRT
 <213> Homo sapiens

```

<400> 39
Met Ile Ser Leu Pro Gly Pro Leu Val Thr Asn Leu Leu Arg Phe Leu
  1             5             10             15

Phe Leu Gly Leu Ser Ala Leu Ala Pro Pro Ser Arg Ala Gln Leu Gln
      20             25             30

Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly Gly Glu Val
      35             40             45

Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val Ser Ser Ser Gln
      50             55             60

Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe Lys Gln Lys Glu Lys
      65             70             75             80

Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly Val Thr Thr Ser Lys Pro
      85             90             95

Gly Val Ser Leu Val Tyr Ser Met Pro Ser Arg Asn Leu Ser Leu Arg
      100            105            110

Leu Glu Gly Leu Gln Glu Lys Asp Ser Gly Pro Tyr Ser Cys Ser Val
      115            120            125

Asn Val Gln Asp Lys Gln Gly Lys Ser Arg Gly His Ser Ile Lys Thr
      130            135            140

Leu Glu Leu Asn Val Leu Val Pro Pro Ala Pro Pro Ser Cys Arg Leu
      145            150            155            160

Gln Gly Val Pro His Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser
      165            170            175

Pro Arg Ser Lys Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro
      180            185            190

Ser Phe Gln Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser
      195            200            205

```

Leu Ser Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys
 210 215 220
 Lys Ala His Asn Glu Val Gly Thr Ala Gln Cys Asn Val Thr Leu Glu
 225 230 235 240
 Val Ser Thr Gly Pro Gly Ala Ala Val Val Ala Gly Ala Val Val Gly
 245 250 255
 Thr Leu Val Gly Leu Gly Leu Leu Ala Gly Leu Val Leu Leu Tyr His
 260 265 270
 Arg Arg Gly Lys Ala Leu Glu Glu Pro Ala Asn Asp Ile Lys Glu Asp
 275 280 285
 Ala Ile Ala Pro Arg Thr Leu Pro Trp Pro Lys Ser Ser Asp Thr Ile
 290 295 300
 Ser Lys Asn Gly Thr Leu Ser Ser Val Thr Ser Ala Arg Ala Leu Arg
 305 310 315 320
 Pro Pro His Gly Pro Pro Arg Pro Gly Ala Leu Thr Pro Thr Pro Ser
 325 330 335
 Leu Ser Ser Gln Ala Leu Pro Ser Pro Arg Leu Pro Thr Thr Asp Gly
 340 345 350
 Ala His Pro Gln Pro Ile Ser Pro Ile Pro Gly Gly Val Ser Ser Ser
 355 360 365
 Gly Leu Ser Arg Met Gly Ala Val Pro Val Met Val Pro Ala Gln Ser
 370 375 380
 Gln Ala Gly Ser Leu Val
 385 390

<210> 40
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 40
 agggctctcca ggagaaagac tc

22

<210> 41
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 41
 attgtgggcc ttgcagacat agac 24

 <210> 42
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 42
 ggccacagca tcaaaacctt agaactcaat gtactgggtc ctccagctcc 50

 <210> 43
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 43
 gtgtgacaca gcgtgggc 18

 <210> 44
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 44
 gaccggcagg cttctgcg 18

 <210> 45
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 45
 cagcagcttc agccaccagg agtgg 25

 <210> 46
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 46

ctgagccgtg ggctgcagtc tcgc

24

<210> 47

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 47

ccgactacga ctggttcttc atcatgcagg atgacacata tgtgc

45

<210> 48

<211> 2822

<212> DNA

<213> Homo sapiens

<400> 48

cgccaccact	gcggccaccg	ccaatgaaac	gcctcccgt	cctagtgggt	ttttccactt	60
tgttgaattg	ttcctatact	caaaattgca	ccaagacacc	ttgtctccca	aatgcaaaat	120
gtgaaatacg	caatggaatt	gaagcctgct	attgcaacat	gggattttca	ggaaatgggtg	180
tcacaatttg	tgaagatgat	aatgaatgtg	gaaatttaac	tcagtcctgt	ggcgaaaatg	240
ctaattgcac	taacacagaa	ggaagttatt	attgtatgtg	tgtacctggc	ttcagatcca	300
gcagtaacca	agacaggttt	atcactaatg	atggaaccgt	ctgtatagaa	aatgtgaatg	360
caaaactgcc	tttagataat	gtctgtatag	ctgcaaatat	taataaaaact	ttaacaaaaa	420
tcagatccat	aaaagaacct	gtggctttgc	tacaagaagt	ctatagaaat	tctgtgacag	480
atctttcacc	aacagatata	attacatata	tagaaatatt	agctgaatca	tcttcattac	540
taggttacaa	gaacaacact	atctcagcca	aggacaccct	ttctaactca	actcttactg	600
aattttgtaa	aaccgtgaat	aattttgttc	aaagggatac	atgtgtagtt	tgggacaagt	660
tatctgtgaa	tcataggaga	acacatctta	caaaactcat	gcacactggt	gaacaagcta	720
ctttaaggat	atcccagagc	ttccaaaaga	ccacagaggt	tgatacaaat	tcaacggata	780
tagctctcaa	agttttcttt	tttgattcat	ataacatgaa	acatattcat	cctcatatga	840
atatggatgg	agactacata	aatatatatt	caaagagaaa	agctgcatat	gattcaaagt	900
gcaatgttgc	agttgcattt	ttatattata	agagtattgg	tcctttgctt	tcattcatctg	960
acaacttctt	attgaaacct	caaaattatg	ataattctga	agaggaggaa	agagtcatat	1020
cttcagtaat	ttcagtctca	atgagctcaa	acccacccac	attatatgaa	cttgaaaaaa	1080
taacatttac	attaagtcac	cgaaagggtca	cagataggta	taggagtcta	tgtgcatttt	1140
ggaattactc	acctgatacc	atgaatggca	gctgggtcttc	agagggctgt	gagctgacat	1200
actcaaataga	gaccacacac	tcattgccgct	gtaatcacct	gacacatttt	gcaattttga	1260
tgtcctctgg	tccttccatt	ggtattaaag	attataatat	tcttacaagg	atcactcaac	1320
taggaataat	tatttctactg	atgtgtcttg	ccatatgcat	ttttaccttc	tgggttcttca	1380
gtgaaattca	aagcaccagg	acaacaattc	acaaaaatct	ttgctgtagc	ctatttcttg	1440
ctgaacttgt	ttttcttggt	gggatcaata	caaatactaa	taagctcttc	tgttcaatca	1500
ttgccggact	gctacactac	ttcttttttag	ctgcttttgc	atggatgtgc	attgaaggca	1560
tacatctcta	tctcattggt	gtgggtgtca	tctacaacaa	gggatttttg	cacaagaatt	1620
tttatatctt	tggctatcta	agcccagccg	tggtagttgg	attttcggca	gcactaggat	1680
acagatatta	tggcacaacc	aaagtatggt	ggcttagcac	cgaacaaac	tttatttgga	1740
gttttatagg	accagcatgc	ctaatacttc	ttgttaatct	cttggctttt	ggagtcattca	1800
tatacaaagt	ttttcgtcac	actgcagggt	tgaaccagaa	agttagttgc	tttgagaaca	1860
taaggtcttg	tgaagaggga	gccctcgctc	ttctgttctt	tctcggcacc	acctggatct	1920

```

ttgggggttct ccatgtttgtg cacgcatcag tggttacagc ttacctcttc acagtcagca 1980
atgctttcca ggggatgttc atttttttat tcctgtgtgt tttatctaga aagattcaag 2040
aagaatatta cagattgttc aaaaatgtcc cctgttggtt tggatgttta aggtaaacat 2100
agagaatggt ggataattac aactgcacaa aaataaaaat tccaagctgt ggatgaccaa 2160
tgtataaaaa tgactcatca aattatccaa ttattaacta ctagacaaaa agtattttaa 2220
atcagttttt ctgtttatgc tataggaact gtagataata aggtaaaatt atgtatcata 2280
tagatatact atgtttttct atgtgaaata gttctgtcaa aaatagtatt gcagatattt 2340
ggaaagtaat tggttttctca ggagtgatat cactgcaccc aaggaaagat tttctttcta 2400
acacgagaag tatatgaatg tcctgaagga aaccactggc ttgatatttc tgtgactcgt 2460
gttgcccttg aaactagtc cctaccacct cggtaatgag ctccattaca gaaagtggaa 2520
cataagagaa tgaaggggca gaatatcaaa cagtgaaaag ggaatgataa gatgtatttt 2580
gaatgaactg ttttttctgt agactagctg agaaattggt gacataaaaat aaagaattga 2640
agaaacacat tttaccattt tgtgaattgt tctgaactta aatgtccact aaaacaactt 2700
agacttctgt ttgctaaatc tgtttctttt tctaataattc taaaaaaaaa aaaaagggtt 2760
acctccacaa attgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2820
aa

```

<210> 49
 <211> 690
 <212> PRT
 <213> Homo sapiens

<400> 49
 Met Lys Arg Leu Pro Leu Leu Val Val Phe Ser Thr Leu Leu Asn Cys
 1 5 10 15
 Ser Tyr Thr Gln Asn Cys Thr Lys Thr Pro Cys Leu Pro Asn Ala Lys
 20 25 30
 Cys Glu Ile Arg Asn Gly Ile Glu Ala Cys Tyr Cys Asn Met Gly Phe
 35 40 45
 Ser Gly Asn Gly Val Thr Ile Cys Glu Asp Asp Asn Glu Cys Gly Asn
 50 55 60
 Leu Thr Gln Ser Cys Gly Glu Asn Ala Asn Cys Thr Asn Thr Glu Gly
 65 70 75 80
 Ser Tyr Tyr Cys Met Cys Val Pro Gly Phe Arg Ser Ser Ser Asn Gln
 85 90 95
 Asp Arg Phe Ile Thr Asn Asp Gly Thr Val Cys Ile Glu Asn Val Asn
 100 105 110
 Ala Asn Cys His Leu Asp Asn Val Cys Ile Ala Ala Asn Ile Asn Lys
 115 120 125
 Thr Leu Thr Lys Ile Arg Ser Ile Lys Glu Pro Val Ala Leu Leu Gln
 130 135 140
 Glu Val Tyr Arg Asn Ser Val Thr Asp Leu Ser Pro Thr Asp Ile Ile
 145 150 155 160
 Thr Tyr Ile Glu Ile Leu Ala Glu Ser Ser Ser Leu Leu Gly Tyr Lys
 165 170 175
 Asn Asn Thr Ile Ser Ala Lys Asp Thr Leu Ser Asn Ser Thr Leu Thr

180					185					190					
Glu	Phe	Val	Lys	Thr	Val	Asn	Asn	Phe	Val	Gln	Arg	Asp	Thr	Phe	Val
		195					200					205			
Val	Trp	Asp	Lys	Leu	Ser	Val	Asn	His	Arg	Arg	Thr	His	Leu	Thr	Lys
	210					215					220				
Leu	Met	His	Thr	Val	Glu	Gln	Ala	Thr	Leu	Arg	Ile	Ser	Gln	Ser	Phe
225						230					235				240
Gln	Lys	Thr	Thr	Glu	Phe	Asp	Thr	Asn	Ser	Thr	Asp	Ile	Ala	Leu	Lys
				245					250					255	
Val	Phe	Phe	Phe	Asp	Ser	Tyr	Asn	Met	Lys	His	Ile	His	Pro	His	Met
			260					265					270		
Asn	Met	Asp	Gly	Asp	Tyr	Ile	Asn	Ile	Phe	Pro	Lys	Arg	Lys	Ala	Ala
		275					280					285			
Tyr	Asp	Ser	Asn	Gly	Asn	Val	Ala	Val	Ala	Phe	Leu	Tyr	Tyr	Lys	Ser
	290					295					300				
Ile	Gly	Pro	Leu	Leu	Ser	Ser	Ser	Asp	Asn	Phe	Leu	Leu	Lys	Pro	Gln
305						310					315				320
Asn	Tyr	Asp	Asn	Ser	Glu	Glu	Glu	Glu	Arg	Val	Ile	Ser	Ser	Val	Ile
				325					330					335	
Ser	Val	Ser	Met	Ser	Ser	Asn	Pro	Pro	Thr	Leu	Tyr	Glu	Leu	Glu	Lys
			340					345					350		
Ile	Thr	Phe	Thr	Leu	Ser	His	Arg	Lys	Val	Thr	Asp	Arg	Tyr	Arg	Ser
		355					360					365			
Leu	Cys	Ala	Phe	Trp	Asn	Tyr	Ser	Pro	Asp	Thr	Met	Asn	Gly	Ser	Trp
	370					375					380				
Ser	Ser	Glu	Gly	Cys	Glu	Leu	Thr	Tyr	Ser	Asn	Glu	Thr	His	Thr	Ser
385						390					395				400
Cys	Arg	Cys	Asn	His	Leu	Thr	His	Phe	Ala	Ile	Leu	Met	Ser	Ser	Gly
				405					410					415	
Pro	Ser	Ile	Gly	Ile	Lys	Asp	Tyr	Asn	Ile	Leu	Thr	Arg	Ile	Thr	Gln
			420					425					430		
Leu	Gly	Ile	Ile	Ile	Ser	Leu	Ile	Cys	Leu	Ala	Ile	Cys	Ile	Phe	Thr
		435					440					445			
Phe	Trp	Phe	Phe	Ser	Glu	Ile	Gln	Ser	Thr	Arg	Thr	Thr	Ile	His	Lys
	450					455					460				
Asn	Leu	Cys	Cys	Ser	Leu	Phe	Leu	Ala	Glu	Leu	Val	Phe	Leu	Val	Gly
465						470					475				480
Ile	Asn	Thr	Asn	Thr	Asn	Lys	Leu	Phe	Cys	Ser	Ile	Ile	Ala	Gly	Leu

485										490					495				
Leu	His	Tyr	Phe	Phe	Leu	Ala	Ala	Phe	Ala	Trp	Met	Cys	Ile	Glu	Gly				
			500					505					510						
Ile	His	Leu	Tyr	Leu	Ile	Val	Val	Gly	Val	Ile	Tyr	Asn	Lys	Gly	Phe				
		515					520					525							
Leu	His	Lys	Asn	Phe	Tyr	Ile	Phe	Gly	Tyr	Leu	Ser	Pro	Ala	Val	Val				
		530				535					540								
Val	Gly	Phe	Ser	Ala	Ala	Leu	Gly	Tyr	Arg	Tyr	Tyr	Gly	Thr	Thr	Lys				
545					550					555					560				
Val	Cys	Trp	Leu	Ser	Thr	Glu	Asn	Asn	Phe	Ile	Trp	Ser	Phe	Ile	Gly				
				565					570					575					
Pro	Ala	Cys	Leu	Ile	Ile	Leu	Val	Asn	Leu	Leu	Ala	Phe	Gly	Val	Ile				
			580					585					590						
Ile	Tyr	Lys	Val	Phe	Arg	His	Thr	Ala	Gly	Leu	Lys	Pro	Glu	Val	Ser				
		595					600					605							
Cys	Phe	Glu	Asn	Ile	Arg	Ser	Cys	Ala	Arg	Gly	Ala	Leu	Ala	Leu	Leu				
		610				615					620								
Phe	Leu	Leu	Gly	Thr	Thr	Trp	Ile	Phe	Gly	Val	Leu	His	Val	Val	His				
625					630					635					640				
Ala	Ser	Val	Val	Thr	Ala	Tyr	Leu	Phe	Thr	Val	Ser	Asn	Ala	Phe	Gln				
				645					650					655					
Gly	Met	Phe	Ile	Phe	Leu	Phe	Leu	Cys	Val	Leu	Ser	Arg	Lys	Ile	Gln				
			660					665					670						
Glu	Glu	Tyr	Tyr	Arg	Leu	Phe	Lys	Asn	Val	Pro	Cys	Cys	Phe	Gly	Cys				
		675					680					685							
Leu	Arg																		
		690																	

<210> 50
 <211> 589
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> (61)..(61)
 <223> a, t, c or g

<400> 50
 tggaaacata tcctccctca tatgaatatg gatggagact acataaatat atttccaaag 60
 ngaaaagccg gcatatggat tcaaattggca atgttgacagt tgcattttta tattataaga 120
 gtatttggtcc ctttgctttc atcatctgac aacttcttat tgaaacctca aaattatgat 180
 aattctgaag aggaggaaag agtcatatct tcagtaattt cagtctcaat gagctcaaac 240
 ccacccacat tatatgaact tgaaaaaata acattttacat taagtcatcg aaaggtcaca 300

gataggtata ggagtctatg tggcattttg gaatactcac ctgataccat gaatggcagc 360
tggctctcag agggctgtga gctgacatac tcaaatagaga cccacacctc atgccgctgt 420
aatcacctga cacattttgc aattttgatg tcctctgggc cttccattgg tattaaagat 480
tataatattc ttacaaggat cactcaacta ggaataatta tttcactgat ttgtcttgcc 540
atatgcattt ttaccttctg gttcttcagt gaaattcaaa gcaccagga 589

<210> 51
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 51
ggtaatgagc tccattacag 20

<210> 52
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 52
ggagtagaaa gcgcatgg 18

<210> 53
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 53
cacctgatac catgaatggc ag 22

<210> 54
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 54
cgagctcgaa ttaattcg 18

<210> 55
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 55

ggatctcctg agctcagg

18

<210> 56

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 56

cctagttgag tgatccttgt aag

23

<210> 57

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 57

atgagacca cacctcatgc cgctgtaatc acctgacaca ttttgcaatt

50

<210> 58

<211> 2137

<212> DNA

<213> Homo sapiens

<400> 58

gctcccagcc aagaacctcg gggccgctgc gcggtgggga ggagttcccc gaaacccggc 60
cgctaagcga ggcctcctcc tcccgcagat ccgaacggcc tgggcggggt caccgccgct 120
gggacaagaa gccgcgcgct gcctgcccg gcccggggag ggggctgggg ctggggcccg 180
aggcggggtg tgagtgggtg tgtgcgggg gcggaggctt gatgcaatcc cgataagaaa 240
tgctcgggtg tcttgggcac ctaccgctgg ggcccgtgta gcgctactat ataaggctgc 300
cgccccggag ccgcgcgcgc gtcagagcag gacgcctgcg tccaggatct agggccacga 360
ccatcccaac ccggcactca cagccccgca gcgcateccg gtcgccgccc agcctcccgc 420
acccccatcg ccggagctgc gccgagagcc ccaggaggt gccatgcgga gcgggtgtgt 480
ggtggtccac gtatggatcc tggccggcct ctggctggcc gtggccgggc gccccctcgc 540
cttctcggac gcggggcccc acgtgcacta cggctggggc gaccccatcc gcctgcggca 600
cctgtacacc tccggcccc acgggtcttc cagctgcttc ctgcgcatcc gtgccgacgg 660
cgctcgtggac tgcgcgcggg gccagagcgc gcacagtttg ctggagatca aggcagtcgc 720
tctgcggacc gtggccatca agggcgtgca cagcgtgcgg tacctctgca tgggcgccga 780
cggcaagatg caggggctgc ttcagtactc ggaggaagac tgtgctttcg aggaggagat 840
ccgcccagat ggctacaatg tgtaccgatc cgagaagcac cgcctcccgg tctccctgag 900
cagtgcacaa cagcggcagc tgtacaagaa cagaggcttt cttccactct ctcatctcct 960
gcccattgct cccatggtcc cagaggagcc tgaggacctc aggggccact tggaatctga 1020
catgttctct tcgcccctgg agaccgacag catggacca tttgggcttg tcaccggact 1080

```

ggaggccgtg aggagtccca gctttgagaa gtaactgaga ccatgcccg gctcttcac 1140
tgctgccagg ggctgtggta cctgcagcgt gggggacgtg cttctacaag aacagtcctg 1200
agtccacgtt ctgttttagct ttaggaagaa acatctagaa gttgtacata ttcagagttt 1260
tccattggca gtgccagttt ctagccaata gacttgtctg atcataacat tgtaagcctg 1320
tagcttgccc agctgctgcc tgggccccca ttctgctccc tcgaggttgc tggacaagct 1380
gctgcactgt ctcaattctg cttgaatacc tccatcgatg gggaactcac ttcctttgga 1440
aaaattctta tgtcaagctg aaattctcta attttttctc atcacttccc caggagcagc 1500
cagaagacag gcagtagttt taatttcagg aacaggtgat ccactctgta aaacagcagg 1560
taaatttcac tcaaccccat gtgggaattg atctatatct ctacttccag ggaccatttg 1620
cccttcccaa atccctccag gccagaactg actggagcag gcatggccca ccaggcttca 1680
ggagtagggg aagcctggag ccccaactca gccctgggac aacttgagaa tccccctga 1740
ggccagttct gtcattgatg ctgtcctgag aataacttgc tgtcccgtg tcacctgctt 1800
ccatctccca gccaccagc cctctgcca cctcacatgc ctccccatgg attggggcct 1860
cccaggcccc ccaccttatg tcaacctgca cttcttgttc aaaaatcagg aaaagaaaag 1920
atttgaagac cccaagtctt gtcaataact tgctgtgtgg aagcagcggg ggaagacct 1980
gaaccctttc cccagcactt ggttttccaa catgatattt atgagtaatt tattttgata 2040
tgtacatctc ttattttctt acattattta tgcccccaaa ttatatttat gtatgtaagt 2100
gaggtttgtt ttgtatatta aaatggagtt tgtttgt 2137

```

<210> 59

<211> 216

<212> PRT

<213> Homo sapiens

<400> 59

```

Met Arg Ser Gly Cys Val Val Val His Val Trp Ile Leu Ala Gly Leu
  1                      5                      10                      15

```

```

Trp Leu Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro
                20                      25                      30

```

```

His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr
    35                      40                      45

```

```

Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala
    50                      55                      60

```

```

Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu
    65                      70                      75                      80

```

```

Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His
    85                      90                      95

```

```

Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu
    100                      105                      110

```

```

Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro
    115                      120                      125

```

```

Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser
    130                      135                      140

```

```

Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu
    145                      150                      155                      160

```

```

Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro
    165                      170                      175

```

Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu
 180 185 190

Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala
 195 200 205

Val Arg Ser Pro Ser Phe Glu Lys
 210 215

<210> 60
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 60
 atccgccag atggctacaa tgtgta 26

<210> 61
 <211> 42
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 61
 gcctcccggg ctccctgagc agtgccaaac agcggcagtg ta 42

<210> 62
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 62
 ccagtccggg gacaagccca aa 22

<210> 63
 <211> 1295
 <212> DNA
 <213> Homo sapiens

<400> 63
 ccagaagtt caagggcccc cggcctcctg cgctcctgcc gccgggaccc tcgacctcct 60
 cagagcagcc ggctgccgcc ccgggaagat ggcgaggagg agccgccacc gcctcctcct 120
 gctgctgctg cgctacctgg tggcgccct gggctatcat aaggcctatg ggttttctgc 180
 cccaaaagac caacaagtag tcacagcagt agagtaccaa gaggtatatt tagcctgcaa 240
 aaccccaaag aagactgttt cctccagatt agagtggaag aaactgggtc ggagtgtctc 300

```

ctttgtctac tatcaacaga ctcttcaagg tgattttaaa aatcgagctg agatgataga 360
tttcaatatc cggatcaaaa atgtgacaag aagtgatgcg gggaaatatc gttgtgaagt 420
tagtgcccca tctgagcaag gccaaaacct ggaagaggat acagtcactc tggaagtatt 480
agtggctcca gcagttccat catgtgaagt accctcttct gctctgagtg gaactgtggg 540
agagctacga tgtcaagaca aagaagggaa tccagctcct gaatacacat ggtttaagga 600
tggcatccgt ttgctagaaa atcccagact tggctcccaa agcaccaaca gctcatacac 660
aatgaataca aaaactggaa ctctgcaatt taatactgtt tccaaactgg acactggaga 720
atattcctgt gaagcccgcg attctgttgg atatcgagg tgcctggga aacgaatgca 780
agtagatgat ctcaacataa gtggcatcat agcagccgta gtagttgtgg ccttagtgat 840
ttccgtttgt ggccttggtg tatgctatgc tcagaggaaa ggctactttt caaaagaaac 900
ctccttccag aagagtaatt cttcatctaa agccacgaca atgagtgaag atgtgcagtg 960
gctcacgcct gtaatcccag cactttggaa ggccgcggcg ggcggatcac gaggtcagga 1020
gttctagacc agtctggcca atatggtgaa accccatctc tactaaaata caaaaattag 1080
ctgggcatgg tggcatgtgc ctgcagttcc agctgcttgg gagacaggag aatcacttga 1140
acccgggagg cggaggttgc agtgagctga gatcacgcca ctgcagtcca gcctgggtaa 1200
cagagcaaga ttccatctca aaaaataaaa taaataaata aataaatact ggtttttacc 1260
tgtagaattc ttacaataaa tatagcttga tattu 1295

```

<210> 64
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 64

Met	Ala	Arg	Arg	Ser	Arg	His	Arg	Leu	Leu	Leu	Leu	Leu	Leu	Arg	Tyr
1				5				10						15	
Leu	Val	Val	Ala	Leu	Gly	Tyr	His	Lys	Ala	Tyr	Gly	Phe	Ser	Ala	Pro
			20					25					30		
Lys	Asp	Gln	Gln	Val	Val	Thr	Ala	Val	Glu	Tyr	Gln	Glu	Ala	Ile	Leu
		35					40					45			
Ala	Cys	Lys	Thr	Pro	Lys	Lys	Thr	Val	Ser	Ser	Arg	Leu	Glu	Trp	Lys
	50					55					60				
Lys	Leu	Gly	Arg	Ser	Val	Ser	Phe	Val	Tyr	Tyr	Gln	Gln	Thr	Leu	Gln
65					70					75					80
Gly	Asp	Phe	Lys	Asn	Arg	Ala	Glu	Met	Ile	Asp	Phe	Asn	Ile	Arg	Ile
			85						90					95	
Lys	Asn	Val	Thr	Arg	Ser	Asp	Ala	Gly	Lys	Tyr	Arg	Cys	Glu	Val	Ser
		100						105					110		
Ala	Pro	Ser	Glu	Gln	Gly	Gln	Asn	Leu	Glu	Glu	Asp	Thr	Val	Thr	Leu
		115					120					125			
Glu	Val	Leu	Val	Ala	Pro	Ala	Val	Pro	Ser	Cys	Glu	Val	Pro	Ser	Ser
	130					135					140				
Ala	Leu	Ser	Gly	Thr	Val	Val	Glu	Leu	Arg	Cys	Gln	Asp	Lys	Glu	Gly
145				150						155					160
Asn	Pro	Ala	Pro	Glu	Tyr	Thr	Trp	Phe	Lys	Asp	Gly	Ile	Arg	Leu	Leu
			165						170					175	

Glu	Asn	Pro	Arg	Leu	Gly	Ser	Gln	Ser	Thr	Asn	Ser	Ser	Tyr	Thr	Met
			180					185					190		
Asn	Thr	Lys	Thr	Gly	Thr	Leu	Gln	Phe	Asn	Thr	Val	Ser	Lys	Leu	Asp
		195					200					205			
Thr	Gly	Glu	Tyr	Ser	Cys	Glu	Ala	Arg	Asn	Ser	Val	Gly	Tyr	Arg	Arg
	210					215					220				
Cys	Pro	Gly	Lys	Arg	Met	Gln	Val	Asp	Asp	Leu	Asn	Ile	Ser	Gly	Ile
225					230					235					240
Ile	Ala	Ala	Val	Val	Val	Val	Ala	Leu	Val	Ile	Ser	Val	Cys	Gly	Leu
			245						250					255	
Gly	Val	Cys	Tyr	Ala	Gln	Arg	Lys	Gly	Tyr	Phe	Ser	Lys	Glu	Thr	Ser
			260					265					270		
Phe	Gln	Lys	Ser	Asn	Ser	Ser	Ser	Lys	Ala	Thr	Thr	Met	Ser	Glu	Asn
		275					280					285			
Val	Gln	Trp	Leu	Thr	Pro	Val	Ile	Pro	Ala	Leu	Trp	Lys	Ala	Ala	Ala
	290					295					300				
Gly	Gly	Ser	Arg	Gly	Gln	Glu	Phe								
305					310										

<210> 65
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 65
 atcgttgatga agttagtgcc cc 22

<210> 66
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 66
 acctgcgata tccaacagaa ttg 23

<210> 67
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 67

ggaagaggat acagtcactc tggaagtatt agtggctcca gcagttcc

48

<210> 68

<211> 2639

<212> DNA

<213> Homo sapiens

<400> 68

gacatcgag	gtgggctagc	actgaaactg	cttttcaaga	cgaggaagag	gaggagaaag	60
agaaagaaga	ggaagatggt	gggcaacatt	tatttaacat	gctccacagc	ccggaccctg	120
gcatcatgct	gctattcctg	caaatactga	agaagcatgg	gatttaaata	ttttacttct	180
aaataaatga	attactcaat	ctcctatgac	catctataca	tactccacct	tcaaaaagta	240
catcaatatt	atatcattaa	ggaaatagta	accttctctt	ctccaatatg	catgacattt	300
ttggacaatg	caattgtggc	actggcactt	atttcagtga	agaaaaactt	tgtggttcta	360
tggcattcat	catttgacaa	atgcaagcat	cttctttatc	aatcagctcc	tattgaactt	420
actagcactg	actgtggaat	ccttaagggc	ccattacatt	tctgaagaag	aaagctaaga	480
tgaaggacat	gccactccga	attcatgtgc	tacttggcct	agctatcact	acactagtac	540
aagctgtaga	taaaaaagtg	gattgtccac	ggttatgtac	gtgtgaaatc	aggccttggg	600
ttacaccag	atccatttat	atggaagcat	ctacagtgga	ttgtaatgat	ttaggtcttt	660
taactttccc	agccagattg	ccagctaaca	cacagattct	tctcctacag	actaacaata	720
ttgcaaaaat	tgaatactcc	acagactttc	cagtaaacct	tactggcctg	gatttatctc	780
aaaacaattt	atcttcagtc	accaatatta	atgtaaaaaa	gatgcctcag	ctcctttctg	840
tgtacctaga	ggaaaacaaa	cttactgaac	tgcctgaaaa	atgtctgtcc	gaactgagca	900
acttacaaga	actctatatt	aatcacaaact	tgctttctac	aatttcacct	ggagccttta	960
ttggcctaca	taatcttctt	cgacttcata	tcaattcaaa	tagattgcag	atgatcaaca	1020
gtaagtgggt	tgatgtctct	ccaaatctag	agattctgat	gattggggaa	aatccaatta	1080
tcagaatcaa	agacatgaac	tttaagcctc	ttatcaatct	tcgcagcctg	gttatagctg	1140
gtataaacct	cacagaaata	ccagataacg	ccttggttgg	actggaaaac	ttagaaagca	1200
tctcttttta	cgataacagg	cttattaaag	taccccatgt	tgctcttcaa	aaagttgtaa	1260
atctcaaat	tttgatctta	aataaaaaatc	ctattaatag	aatacgaagg	ggtgatttta	1320
gcaatatgct	acacttaaaa	gagttgggga	taaataatat	gcctgagctg	atttccatcg	1380
atagtcttgc	tgtggataac	ctgccagatt	taagaaaaat	agaagctact	aacaacccta	1440
gattgtctta	cattcacccc	aatgcatttt	tcagactccc	caagctggaa	tcactcatgc	1500
tgaacagcaa	tgtctcagtc	gccctgtacc	atggtaccat	tgagtctctg	ccaaacctca	1560
aggaaatcag	catacacagt	aaccccatca	ggtgtgactg	tgtcatccgt	tggatgaaca	1620
tgaacaaaac	caacattcga	ttcatggagc	cagattcact	gttttgctg	gaccacctg	1680
aattccaagg	tcagaatggt	cggcaagtgc	atttcagggg	catgatggaa	atttgtctcc	1740
ctcttatagc	tcctgagagc	tttccttcta	atctaaatgt	agaagctggg	agctatgttt	1800
cctttcactg	tagagctact	gcagaaccac	agcctgaaat	ctactggata	acaccttctg	1860
gtcaaaaact	cttgccataat	accctgacag	acaagttcta	tgtccattct	gagggaacac	1920
tagatataaa	tggcgtaact	cccaaagaag	ggggtttata	tacttgtata	gcaactaacc	1980
tagttggcgc	tgacttgaag	tctgttatga	tcaaagtgga	tggatctttt	ccacaagata	2040
acaatggctc	tttgaatatt	aaaataagag	atattcaggg	caattcagtt	ttggtgtcct	2100
ggaaagcaag	ttctaaaatt	ctcaaatcta	gtgttaaatt	gacagccttt	gtcaagactg	2160
aaaattctca	tgtctgcgca	agtgtctgaa	taccatctga	tgtcaaggta	tataatctta	2220
ctcatctgaa	tccatcaact	gagtataaaa	tttgtattga	tattcccacc	atctatcaga	2280
aaaacagaaa	aaaatgtgta	aatgtcacca	ccaaagggtt	gcacctgat	caaaaagagt	2340
atgaaaagaa	taataccaca	acacttatgg	cctgtcttgg	aggccttctg	gggattattg	2400
gtgtgatatg	tcttatcagc	tgctctctct	cagaaatgaa	ctgtgatggg	ggacacagct	2460
atgtgaggaa	ttacttacag	aaaccaacct	ttgcattagg	tgagctttat	cctcctctga	2520
taaatctctg	ggaagcagga	aaagaaaaaa	gtacatcact	gaaagtaaaa	gcaactgtta	2580
taggtttacc	aacaaatatg	tcctaaaaaac	caccaaggaa	acctactcca	aaaatgaac	2639

<210> 69
<211> 708
<212> PRT
<213> Homo sapiens

<400> 69
Met Lys Asp Met Pro Leu Arg Ile His Val Leu Leu Gly Leu Ala Ile
1 5 10 15
Thr Thr Leu Val Gln Ala Val Asp Lys Lys Val Asp Cys Pro Arg Leu
20 25 30
Cys Thr Cys Glu Ile Arg Pro Trp Phe Thr Pro Arg Ser Ile Tyr Met
35 40 45
Glu Ala Ser Thr Val Asp Cys Asn Asp Leu Gly Leu Leu Thr Phe Pro
50 55 60
Ala Arg Leu Pro Ala Asn Thr Gln Ile Leu Leu Leu Gln Thr Asn Asn
65 70 75 80
Ile Ala Lys Ile Glu Tyr Ser Thr Asp Phe Pro Val Asn Leu Thr Gly
85 90 95
Leu Asp Leu Ser Gln Asn Asn Leu Ser Ser Val Thr Asn Ile Asn Val
100 105 110
Lys Lys Met Pro Gln Leu Leu Ser Val Tyr Leu Glu Glu Asn Lys Leu
115 120 125
Thr Glu Leu Pro Glu Lys Cys Leu Ser Glu Leu Ser Asn Leu Gln Glu
130 135 140
Leu Tyr Ile Asn His Asn Leu Leu Ser Thr Ile Ser Pro Gly Ala Phe
145 150 155 160
Ile Gly Leu His Asn Leu Leu Arg Leu His Leu Asn Ser Asn Arg Leu
165 170 175
Gln Met Ile Asn Ser Lys Trp Phe Asp Ala Leu Pro Asn Leu Glu Ile
180 185 190
Leu Met Ile Gly Glu Asn Pro Ile Ile Arg Ile Lys Asp Met Asn Phe
195 200 205
Lys Pro Leu Ile Asn Leu Arg Ser Leu Val Ile Ala Gly Ile Asn Leu
210 215 220
Thr Glu Ile Pro Asp Asn Ala Leu Val Gly Leu Glu Asn Leu Glu Ser
225 230 235 240
Ile Ser Phe Tyr Asp Asn Arg Leu Ile Lys Val Pro His Val Ala Leu
245 250 255
Gln Lys Val Val Asn Leu Lys Phe Leu Asp Leu Asn Lys Asn Pro Ile
260 265 270

Asn	Arg	Ile	Arg	Arg	Gly	Asp	Phe	Ser	Asn	Met	Leu	His	Leu	Lys	Glu	275	280	285
Leu	Gly	Ile	Asn	Asn	Met	Pro	Glu	Leu	Ile	Ser	Ile	Asp	Ser	Leu	Ala	290	295	300
Val	Asp	Asn	Leu	Pro	Asp	Leu	Arg	Lys	Ile	Glu	Ala	Thr	Asn	Asn	Pro	305	310	315
Arg	Leu	Ser	Tyr	Ile	His	Pro	Asn	Ala	Phe	Phe	Arg	Leu	Pro	Lys	Leu	325	330	335
Glu	Ser	Leu	Met	Leu	Asn	Ser	Asn	Ala	Leu	Ser	Ala	Leu	Tyr	His	Gly	340	345	350
Thr	Ile	Glu	Ser	Leu	Pro	Asn	Leu	Lys	Glu	Ile	Ser	Ile	His	Ser	Asn	355	360	365
Pro	Ile	Arg	Cys	Asp	Cys	Val	Ile	Arg	Trp	Met	Asn	Met	Asn	Lys	Thr	370	375	380
Asn	Ile	Arg	Phe	Met	Glu	Pro	Asp	Ser	Leu	Phe	Cys	Val	Asp	Pro	Pro	385	390	395
Glu	Phe	Gln	Gly	Gln	Asn	Val	Arg	Gln	Val	His	Phe	Arg	Asp	Met	Met	405	410	415
Glu	Ile	Cys	Leu	Pro	Leu	Ile	Ala	Pro	Glu	Ser	Phe	Pro	Ser	Asn	Leu	420	425	430
Asn	Val	Glu	Ala	Gly	Ser	Tyr	Val	Ser	Phe	His	Cys	Arg	Ala	Thr	Ala	435	440	445
Glu	Pro	Gln	Pro	Glu	Ile	Tyr	Trp	Ile	Thr	Pro	Ser	Gly	Gln	Lys	Leu	450	455	460
Leu	Pro	Asn	Thr	Leu	Thr	Asp	Lys	Phe	Tyr	Val	His	Ser	Glu	Gly	Thr	465	470	475
Leu	Asp	Ile	Asn	Gly	Val	Thr	Pro	Lys	Glu	Gly	Gly	Leu	Tyr	Thr	Cys	485	490	495
Ile	Ala	Thr	Asn	Leu	Val	Gly	Ala	Asp	Leu	Lys	Ser	Val	Met	Ile	Lys	500	505	510
Val	Asp	Gly	Ser	Phe	Pro	Gln	Asp	Asn	Asn	Gly	Ser	Leu	Asn	Ile	Lys	515	520	525
Ile	Arg	Asp	Ile	Gln	Ala	Asn	Ser	Val	Leu	Val	Ser	Trp	Lys	Ala	Ser	530	535	540
Ser	Lys	Ile	Leu	Lys	Ser	Ser	Val	Lys	Trp	Thr	Ala	Phe	Val	Lys	Thr	545	550	555
Glu	Asn	Ser	His	Ala	Ala	Gln	Ser	Ala	Arg	Ile	Pro	Ser	Asp	Val	Lys	565	570	575

Val Tyr Asn Leu Thr His Leu Asn Pro Ser Thr Glu Tyr Lys Ile Cys
580 585 590

Ile Asp Ile Pro Thr Ile Tyr Gln Lys Asn Arg Lys Lys Cys Val Asn
595 600 605

Val Thr Thr Lys Gly Leu His Pro Asp Gln Lys Glu Tyr Glu Lys Asn
610 615 620

Asn Thr Thr Thr Leu Met Ala Cys Leu Gly Gly Leu Leu Gly Ile Ile
625 630 635 640

Gly Val Ile Cys Leu Ile Ser Cys Leu Ser Pro Glu Met Asn Cys Asp
645 650 655

Gly Gly His Ser Tyr Val Arg Asn Tyr Leu Gln Lys Pro Thr Phe Ala
660 665 670

Leu Gly Glu Leu Tyr Pro Pro Leu Ile Asn Leu Trp Glu Ala Gly Lys
675 680 685

Glu Lys Ser Thr Ser Leu Lys Val Lys Ala Thr Val Ile Gly Leu Pro
690 695 700

Thr Asn Met Ser
705

<210> 70
<211> 1305
<212> DNA
<213> Homo sapiens

<400> 70
gccgggact ggcgcaaggt gcccaagcaa ggaaagaaat aatgaagaga cacatgtgtt 60
agctgcagcc ttttgaaaca cgcaagaagg aaatcaatag tgtggacagg gctggaacct 120
ttaccacgct tgttgagta gatgaggaat gggctcgtga ttatgctgac attccagcat 180
gaatctggta gacctgtggt taaccggttc cctctccatg tgtctcctcc taaaaagttt 240
tgttcttatg atactgtgct ttcattctgc cagtatgtgt cccaagggtc gtctttgttc 300
ttcctctggg ggtttaaatg tcacctgtag caatgcaaat ctcaaggaaa tacctagaga 360
tcttctcctt gaaacagtct tactgtatct ggactccaat cagatcacat ctattcccaa 420
tgaaattttt aaggacctcc atcaactgag agttctcaac ctgtccaaaa atggcattga 480
gtttatcgat gagcatgcct tcaaaggagt agctgaaacc ttgcagactc tggacttgtc 540
cgacaatcgg attcaaagtg tgcacaaaaa tgccttcaat aacctgaagg ccagggccag 600
aattgccaac aaccctggc actgcgactg tactctacag caagttctga ggagcatggc 660
gtccaatcat gagacagccc acaacgtgat ctgtaaaacg tccgtgttgg atgaacatgc 720
tggcagacca ttctcaatg ctgccaacga cgctgacctt tgtaacctcc ctaaaaaac 780
taccgattat gccatgctgg tcaccatggt tggctgggtc actatgggtga tctcatatgt 840
ggtatattat gtgaggcaaa atcaggagga tgcccgaga cacctcgaat acttgaaatc 900
cctgccaaagc aggcagaaga aagcagatga acctgatgat attagcactg tggatatagt 960
tccaaactga ctgtcattga gaaagaaaga aagtagtttg cgattgcagt agaaataagt 1020
ggtttacttc tcccatccat tgtaaacatt tgaaactttg tatttcagtt ttttttgaat 1080
tatgccactg ctgaactttt aacaaacact acaacataaa taatttgagt ttaggtgatc 1140
cacccttaa ttgtaccccc gatggtatat ttctgagtaa gctactatct gaacattagt 1200
tagatccatc tcaatttta ataatgaaat ttattttttt aattttaaaag caaataaaaag 1260
cttaactttg aaccatggga aaaaaaaaaa aaaaaaaaaa aaaca 1305

<210> 71

<211> 259

<212> PRT

<213> Homo sapiens

<400> 71

Met Asn Leu Val Asp Leu Trp Leu Thr Arg Ser Leu Ser Met Cys Leu
1 5 10 15

Leu Leu Gln Ser Phe Val Leu Met Ile Leu Cys Phe His Ser Ala Ser
20 25 30

Met Cys Pro Lys Gly Cys Leu Cys Ser Ser Ser Gly Gly Leu Asn Val
35 40 45

Thr Cys Ser Asn Ala Asn Leu Lys Glu Ile Pro Arg Asp Leu Pro Pro
50 55 60

Glu Thr Val Leu Leu Tyr Leu Asp Ser Asn Gln Ile Thr Ser Ile Pro
65 70 75 80

Asn Glu Ile Phe Lys Asp Leu His Gln Leu Arg Val Leu Asn Leu Ser
85 90 95

Lys Asn Gly Ile Glu Phe Ile Asp Glu His Ala Phe Lys Gly Val Ala
100 105 110

Glu Thr Leu Gln Thr Leu Asp Leu Ser Asp Asn Arg Ile Gln Ser Val
115 120 125

His Lys Asn Ala Phe Asn Asn Leu Lys Ala Arg Ala Arg Ile Ala Asn
130 135 140

Asn Pro Trp His Cys Asp Cys Thr Leu Gln Gln Val Leu Arg Ser Met
145 150 155 160

Ala Ser Asn His Glu Thr Ala His Asn Val Ile Cys Lys Thr Ser Val
165 170 175

Leu Asp Glu His Ala Gly Arg Pro Phe Leu Asn Ala Ala Asn Asp Ala
180 185 190

Asp Leu Cys Asn Leu Pro Lys Lys Thr Thr Asp Tyr Ala Met Leu Val
195 200 205

Thr Met Phe Gly Trp Phe Thr Met Val Ile Ser Tyr Val Val Tyr Tyr
210 215 220

Val Arg Gln Asn Gln Glu Asp Ala Arg Arg His Leu Glu Tyr Leu Lys
225 230 235 240

Ser Leu Pro Ser Arg Gln Lys Lys Ala Asp Glu Pro Asp Asp Ile Ser
245 250 255

Thr Val Val

<210> 72

<211> 2290
 <212> DNA
 <213> Homo sapiens

<400> 72
 accgagccga ggcgaccgaa ggcgcgcccc agatgcaggt gagcaagagg atgctggcgg 60
 ggggcgtgag gagcatgccc agccccctcc tggcctgctg gcagcccatc ctctctgctg 120
 tgctgggctc agtgctgtca ggctcgccca cgggctgccc gccccgctgc gagggtcccg 180
 cccaggaccg cgctgtgctg tgccaccgca agtgctttgt ggcagtcccc gagggcatcc 240
 ccaccgagac gcgcctgctg gacctaggca agaaccgcat caaaacgctc aaccaggacg 300
 agttcgccag cttcccgcac ctggaggagc tggagctcaa cgagaacatc gtgagcgccg 360
 tggagccccg cgccttcaac aacctcttca acctccggac gctgggtctc cgagcaacc 420
 gcctgaagct catcccgcta ggcgtcttca ctggcctcag caacctgacc aagcaggaca 480
 tcagcgagaa caagatcggt atcctactgg actacatgtt tcaggacctg tacaacctca 540
 agtcaactgga ggttggcgac aatgacctcg tctacatctc tcaccgcgcc ttcagcggcc 600
 tcaacagcct ggagcagctg acgctggaga aatgcaacct gacctccatc cccaccgagg 660
 cgctgtccca cctgcacggc ctcatcgctc tgaggctccg gcacctcaac atcaatgcc 720
 tccgggacta ctcttcaag aggtgtgacc gactcaaggt cttggagatc tccactggc 780
 cctacttga caccatgaca cccaactgcc tctacggcct caacctgacg tccctgtcca 840
 tcacacactg caatctgacc gctgtgccct acctggccgt ccgccacctg gtctatctcc 900
 gcttctctca cctctctac aaccccatca gcaccattga gggctccatg ttgcatgagc 960
 tgctccggct gcaggagatc cagctggtgg gcgggcagct ggccgtggtg gagccctatg 1020
 ccttccgcgg cctcaactac ctgcgcgtgc tcaatgtctc tggcaaccag ctgaccacac 1080
 tggaggaatc agtcttccac tcggtgggca acctggagac actcatcctg gactccaacc 1140
 cgctggcctg cgactgtcgg ctctgtggtg tgttccggcg ccgctggcgg ctcaacttca 1200
 accggcagca gccacgtgc gccacgcccg agtttgtcca gggcaaggag ttcaaggact 1260
 tccctgatgt gctactgccc aactacttca cctgcgcgg cgcccgcatc cgggaccgca 1320
 agggccagca ggtgtttgtg gacgagggcc acacggtgca gtttgtgtgc cgggccgatg 1380
 gcgacccgcc gcccgccatc ctctggctct caccgcgaaa gcacctggtc tcagccaaga 1440
 gcaatgggcg gctcacagtc ttccctgatg gcacgctgga ggtgcgctac gccagggtac 1500
 aggacaacgg cacgtacctg tgcacgcgg ccaacgcggg cggcaacgac tccatgcccg 1560
 cccacctgca tgtgcgcagc tactcgcccg actggcccca tcagcccaac aagaccttcg 1620
 ctttcatctc caaccagcgg ggcgagggag agggcaacag caccgcgcc actgtgcctt 1680
 tcccttctga catcaagacc ctcatcatcg ccaccaccat gggcttcatc tctttcctgg 1740
 gcgtcgctct cttctgcctg gtgctgctgt ttctctggag ccggggcaag ggcaacaca 1800
 agcacaacat cgagatcgag tatgtgcccc gaaagtgcga cgcaggcatc agctccgccc 1860
 acgcgccccg caagtccaac atgaagatga tatgaggccg gggcgggggg cagggacccc 1920
 cgggcgggcg ggcaggggaa ggggcctggt cgccacctgc tcaactctca gtccttccca 1980
 cctcctccct acccttctac acacgttctc tttctccctc ccgcctccgt cccctgctgc 2040
 cccccgccag ccctcaccac ctgcccctct tctaccagga cctcagaagc ccagacctgg 2100
 ggacccacc tacacagggg cattgacaga ctggagttga aagccgacga accgacacgc 2160
 ggcagagtca ataattcaat aaaaaagtta cgaactttct ctgtaacttg ggtttcaata 2220
 attatggatt tttatgaaaa cttgaaataa taaaaagaga aaaaaactaa aaaaaaaaaa 2280
 aaaaaaaaaa 2290

<210> 73
 <211> 620
 <212> PRT
 <213> Homo sapiens

<400> 73
 Met Gln Val Ser Lys Arg Met Leu Ala Gly Gly Val Arg Ser Met Pro
 1 5 10 15
 Ser Pro Leu Leu Ala Cys Trp Gln Pro Ile Leu Leu Leu Val Leu Gly
 20 25 30

Ser	Val	Leu	Ser	Gly	Ser	Ala	Thr	Gly	Cys	Pro	Pro	Arg	Cys	Glu	Cys		
		35					40					45					
Ser	Ala	Gln	Asp	Arg	Ala	Val	Leu	Cys	His	Arg	Lys	Cys	Phe	Val	Ala		
	50					55					60						
Val	Pro	Glu	Gly	Ile	Pro	Thr	Glu	Thr	Arg	Leu	Leu	Asp	Leu	Gly	Lys		
	65				70					75					80		
Asn	Arg	Ile	Lys	Thr	Leu	Asn	Gln	Asp	Glu	Phe	Ala	Ser	Phe	Pro	His		
				85					90					95			
Leu	Glu	Glu	Leu	Glu	Leu	Asn	Glu	Asn	Ile	Val	Ser	Ala	Val	Glu	Pro		
			100					105					110				
Gly	Ala	Phe	Asn	Asn	Leu	Phe	Asn	Leu	Arg	Thr	Leu	Gly	Leu	Arg	Ser		
	115						120					125					
Asn	Arg	Leu	Lys	Leu	Ile	Pro	Leu	Gly	Val	Phe	Thr	Gly	Leu	Ser	Asn		
	130					135					140						
Leu	Thr	Lys	Gln	Asp	Ile	Ser	Glu	Asn	Lys	Ile	Val	Ile	Leu	Leu	Asp		
	145				150					155					160		
Tyr	Met	Phe	Gln	Asp	Leu	Tyr	Asn	Leu	Lys	Ser	Leu	Glu	Val	Gly	Asp		
				165					170					175			
Asn	Asp	Leu	Val	Tyr	Ile	Ser	His	Arg	Ala	Phe	Ser	Gly	Leu	Asn	Ser		
		180						185					190				
Leu	Glu	Gln	Leu	Thr	Leu	Glu	Lys	Cys	Asn	Leu	Thr	Ser	Ile	Pro	Thr		
		195					200					205					
Glu	Ala	Leu	Ser	His	Leu	His	Gly	Leu	Ile	Val	Leu	Arg	Leu	Arg	His		
	210					215					220						
Leu	Asn	Ile	Asn	Ala	Ile	Arg	Asp	Tyr	Ser	Phe	Lys	Arg	Leu	Tyr	Arg		
	225				230					235				240			
Leu	Lys	Val	Leu	Glu	Ile	Ser	His	Trp	Pro	Tyr	Leu	Asp	Thr	Met	Thr		
			245						250					255			
Pro	Asn	Cys	Leu	Tyr	Gly	Leu	Asn	Leu	Thr	Ser	Leu	Ser	Ile	Thr	His		
		260						265					270				
Cys	Asn	Leu	Thr	Ala	Val	Pro	Tyr	Leu	Ala	Val	Arg	His	Leu	Val	Tyr		
	275						280					285					
Leu	Arg	Phe	Leu	Asn	Leu	Ser	Tyr	Asn	Pro	Ile	Ser	Thr	Ile	Glu	Gly		
	290					295					300						
Ser	Met	Leu	His	Glu	Leu	Leu	Arg	Leu	Gln	Glu	Ile	Gln	Leu	Val	Gly		
	305				310					315					320		
Gly	Gln	Leu	Ala	Val	Val	Glu	Pro	Tyr	Ala	Phe	Arg	Gly	Leu	Asn	Tyr		
			325						330					335			

Leu	Arg	Val	Leu	Asn	Val	Ser	Gly	Asn	Gln	Leu	Thr	Thr	Leu	Glu	Glu	340	345	350	
Ser	Val	Phe	His	Ser	Val	Gly	Asn	Leu	Glu	Thr	Leu	Ile	Leu	Asp	Ser	355	360	365	
Asn	Pro	Leu	Ala	Cys	Asp	Cys	Arg	Leu	Leu	Trp	Val	Phe	Arg	Arg	Arg	370	375	380	
Trp	Arg	Leu	Asn	Phe	Asn	Arg	Gln	Gln	Pro	Thr	Cys	Ala	Thr	Pro	Glu	385	390	395	400
Phe	Val	Gln	Gly	Lys	Glu	Phe	Lys	Asp	Phe	Pro	Asp	Val	Leu	Leu	Pro	405	410	415	
Asn	Tyr	Phe	Thr	Cys	Arg	Arg	Ala	Arg	Ile	Arg	Asp	Arg	Lys	Ala	Gln	420	425	430	
Gln	Val	Phe	Val	Asp	Glu	Gly	His	Thr	Val	Gln	Phe	Val	Cys	Arg	Ala	435	440	445	
Asp	Gly	Asp	Pro	Pro	Pro	Ala	Ile	Leu	Trp	Leu	Ser	Pro	Arg	Lys	His	450	455	460	
Leu	Val	Ser	Ala	Lys	Ser	Asn	Gly	Arg	Leu	Thr	Val	Phe	Pro	Asp	Gly	465	470	475	480
Thr	Leu	Glu	Val	Arg	Tyr	Ala	Gln	Val	Gln	Asp	Asn	Gly	Thr	Tyr	Leu	485	490	495	
Cys	Ile	Ala	Ala	Asn	Ala	Gly	Gly	Asn	Asp	Ser	Met	Pro	Ala	His	Leu	500	505	510	
His	Val	Arg	Ser	Tyr	Ser	Pro	Asp	Trp	Pro	His	Gln	Pro	Asn	Lys	Thr	515	520	525	
Phe	Ala	Phe	Ile	Ser	Asn	Gln	Pro	Gly	Glu	Gly	Glu	Ala	Asn	Ser	Thr	530	535	540	
Arg	Ala	Thr	Val	Pro	Phe	Pro	Phe	Asp	Ile	Lys	Thr	Leu	Ile	Ile	Ala	545	550	555	560
Thr	Thr	Met	Gly	Phe	Ile	Ser	Phe	Leu	Gly	Val	Val	Leu	Phe	Cys	Leu	565	570	575	
Val	Leu	Leu	Phe	Leu	Trp	Ser	Arg	Gly	Lys	Gly	Asn	Thr	Lys	His	Asn	580	585	590	
Ile	Glu	Ile	Glu	Tyr	Val	Pro	Arg	Lys	Ser	Asp	Ala	Gly	Ile	Ser	Ser	595	600	605	
Ala	Asp	Ala	Pro	Arg	Lys	Phe	Asn	Met	Lys	Met	Ile	610	615	620					

<210> 74
 <211> 22
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 74

tcacctggag cctttattgg cc

22

<210> 75

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 75

ataccagcta taaccaggct gcg

23

<210> 76

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 76

caacagtaag tggtttgatg ctcttccaaa tctagagatt ctgatgattg
gg

50

52

<210> 77

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 77

ccatgtgtct cctcctacaa ag

22

<210> 78

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 78

gggaatagat gtgatctgat tgg

23

<210> 79
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 79
 cacctgtagc aatgcaaadc tcaaggaaat acctagagat cttcctcctg 50

 <210> 80
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 80
 agcaaccgcc tgaagctcat cc 22

 <210> 81
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 81
 aaggcgcggt gaaagatgta gacg 24

 <210> 82
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 82
 gactacatgt ttcaggacct gtacaacctc aagtcactgg aggttggcga 50

 <210> 83
 <211> 1685
 <212> DNA
 <213> Homo sapiens

 <400> 83
 cccacgcgtc cgcacctcgg ccccgggctc cgaagcggct cgggggcgcc ctttcggtca 60
 acatcgtagt ccacccccctc cccatcccca gccccggggg attcaggctc gccagcgccc 120

```

agccagggag cgggccggga agcgcgatgg gggccccagc cgcctcgctc ctgctcctgc 180
tcctgctggt cgcctgctgc tgggcgcccg gcggggccaa cctctcccag gacgacagcc 240
agccctggac atctgatgaa acagtgggtg ctggtggcac cgtggtgctc aagtgccaaag 300
tgaaagatca cgaggactca tccctgcaat ggtctaacc tgctcagcag actctctact 360
ttggggagaa gagagccctt cgagataatc gaattcagct ggttacctct acgccccacg 420
agctcagcat cagcatcagc aatgtggccc tggcagacga gggcgagtac acctgctcaa 480
tcttcactat gcctgtgcga actgccaaagt ccctcgtcac tgtgctagga attccacaga 540
agcccatcat cactggttat aaatcttcat tacgggaaaa agacacagcc accctaaact 600
gtcagtcttc tgggagcaag cctgcagccc ggctcacctg gagaaagggt gaccaagaac 660
tccacggaga accaaccgcg atacaggaag atcccaatgg taaaaccttc actgtcagca 720
gctcggtgac attccaggtt acccgggagg atgatggggc gagcatcgtg tgctctgtga 780
accatgaatc tctaaagga gctgacagat ccacctctca acgcattgaa gttttatata 840
caccaactgc gatgattagg ccagaccctc cccatcctcg tgaggggccag aagctgttgc 900
tacactgtga gggtcgcggc aatccagtc cccagcagta cctatgggag aaggagggca 960
gtgtgccacc cctgaagatg acccaggaga gtgcctgat cttccctttc ctcaacaaga 1020
gtgacagtgg cacctacggc tgcacagcca ccagcaacat gggcagctac aaggcctact 1080
acacctcaa tgtaaatgac cccagtccgg tgccctctc ctccagcacc taccacgcca 1140
tcacgtggg gatcgtggct ttcattgtct tctgctgct catcatgctc atcttctctg 1200
gccactactt gatccggcac aaaggaacct acctgacaca tgaggcaaaa ggctccgacg 1260
atgtccaga cgggacacg gccatcatca atgcagaagg cgggcagtca ggaggggacg 1320
acaagaagga atatttcac tagaggcgcc tgcccacttc ctgcgcccc cagggggcct 1380
gtggggactg ctggggccgt caccaaccgc gacttgta gaagcaaccgc agggccgccc 1440
ctcccgcttg ctccccagcc caccacccc cctgtacaga atgtctgctt tgggtgcggt 1500
tttgtactcg gtttggaatg gggagggagg agggcgggg gaggggaggg ttgccctcag 1560
ccctttccgt ggcttctctg catttggtt attattatt ttgtaacaat cccaaatcaa 1620
atctgtctcc aggtctggaga ggcaggagcc ctggggtgag aaaagcaaaa aacaaacaaa 1680
aaaca 1685

```

<210> 84
 <211> 398
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Gly Ala Pro Ala Ala Ser Leu Leu Leu Leu Leu Leu Phe Ala
 1 5 10 15
 Cys Cys Trp Ala Pro Gly Gly Ala Asn Leu Ser Gln Asp Asp Ser Gln
 20 25 30
 Pro Trp Thr Ser Asp Glu Thr Val Val Ala Gly Gly Thr Val Val Leu
 35 40 45
 Lys Cys Gln Val Lys Asp His Glu Asp Ser Ser Leu Gln Trp Ser Asn
 50 55 60
 Pro Ala Gln Gln Thr Leu Tyr Phe Gly Glu Lys Arg Ala Leu Arg Asp
 65 70 75 80
 Asn Arg Ile Gln Leu Val Thr Ser Thr Pro His Glu Leu Ser Ile Ser
 85 90 95
 Ile Ser Asn Val Ala Leu Ala Asp Glu Gly Glu Tyr Thr Cys Ser Ile
 100 105 110
 Phe Thr Met Pro Val Arg Thr Ala Lys Ser Leu Val Thr Val Leu Gly
 115 120 125

Ile	Pro	Gln	Lys	Pro	Ile	Ile	Thr	Gly	Tyr	Lys	Ser	Ser	Leu	Arg	Glu	
130						135					140					
Lys	Asp	Thr	Ala	Thr	Leu	Asn	Cys	Gln	Ser	Ser	Gly	Ser	Lys	Pro	Ala	
145					150					155					160	
Ala	Arg	Leu	Thr	Trp	Arg	Lys	Gly	Asp	Gln	Glu	Leu	His	Gly	Glu	Pro	
				165					170					175		
Thr	Arg	Ile	Gln	Glu	Asp	Pro	Asn	Gly	Lys	Thr	Phe	Thr	Val	Ser	Ser	
		180						185					190			
Ser	Val	Thr	Phe	Gln	Val	Thr	Arg	Glu	Asp	Asp	Gly	Ala	Ser	Ile	Val	
		195					200					205				
Cys	Ser	Val	Asn	His	Glu	Ser	Leu	Lys	Gly	Ala	Asp	Arg	Ser	Thr	Ser	
	210					215					220					
Gln	Arg	Ile	Glu	Val	Leu	Tyr	Thr	Pro	Thr	Ala	Met	Ile	Arg	Pro	Asp	
225					230					235					240	
Pro	Pro	His	Pro	Arg	Glu	Gly	Gln	Lys	Leu	Leu	Leu	His	Cys	Glu	Gly	
				245					250					255		
Arg	Gly	Asn	Pro	Val	Pro	Gln	Gln	Tyr	Leu	Trp	Glu	Lys	Glu	Gly	Ser	
			260					265					270			
Val	Pro	Pro	Leu	Lys	Met	Thr	Gln	Glu	Ser	Ala	Leu	Ile	Phe	Pro	Phe	
		275					280					285				
Leu	Asn	Lys	Ser	Asp	Ser	Gly	Thr	Tyr	Gly	Cys	Thr	Ala	Thr	Ser	Asn	
	290					295					300					
Met	Gly	Ser	Tyr	Lys	Ala	Tyr	Tyr	Thr	Leu	Asn	Val	Asn	Asp	Pro	Ser	
305					310					315					320	
Pro	Val	Pro	Ser	Ser	Ser	Ser	Thr	Tyr	His	Ala	Ile	Ile	Gly	Gly	Ile	
				325					330					335		
Val	Ala	Phe	Ile	Val	Phe	Leu	Leu	Leu	Ile	Met	Leu	Ile	Phe	Leu	Gly	
			340					345					350			
His	Tyr	Leu	Ile	Arg	His	Lys	Gly	Thr	Tyr	Leu	Thr	His	Glu	Ala	Lys	
		355					360					365				
Gly	Ser	Asp	Asp	Ala	Pro	Asp	Ala	Asp	Thr	Ala	Ile	Ile	Asn	Ala	Glu	
	370					375					380					
Gly	Gly	Gln	Ser	Gly	Gly	Asp	Asp	Lys	Lys	Glu	Tyr	Phe	Ile			
385					390					395						

<210> 85
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 85
 gctaggaatt ccacagaagc cc 22

<210> 86
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 86
 aacctggaat gtcaccgagc tg 22

<210> 87
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 87
 cctagcacag tgacgaggga cttggc 26

<210> 88
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 88
 aagacacagc caccctaaac tgtcagtctt ctgggagcaa gcctgcagcc 50

<210> 89
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 89
 gccctggcag acgagggcga gtacacctgc tcaatcttca ctatgcctgt 50

<210> 90
 <211> 2755

<212> DNA
<213> Homo sapiens

<400> 90

```
ggggggttagg gaggaaggaa tccaccccca cccccccaaa cccttttctt ctcctttcct 60
ggcttcggac attggagcac taaatgaact tgaattgtgt ctgtggcgag caggatgggc 120
gctgttactt tgtgatgaga tcggggatga attgctcgct ttaaaaatgc tgctttggat 180
tctgttgctg gagacgtctc tttgttttgc cgctggaaac gttacagggg acgtttgcaa 240
agagaagatc tgttcctgca atgagataga aggggaccta cacgtagact gtgaaaaaaa 300
gggcttcaca agtctgcagc gtttcactgc cccgacttcc cagttttacc atttatttct 360
gcatggcaat tccctcactc gacttttccc taatgagttc gctaactttt ataatgcggt 420
tagtttgcac atggaaaaca atggccttgca tgaaatcggt ccgggggctt ttctggggct 480
gcagctgggtg aaaaggctgc acatcaacaa caacaagatc aagtcctttc gaaagcagac 540
ttttctgggg ctggacgatc tggaatatct ccaggctgat tttaatttat tacgagatat 600
agacccgggg gccttccagg acttgaacaa gctggagggtg ctcattttaa atgacaatct 660
catcagcacc ctacctgcca acgtgttcca gtatgtgcc atcaccacc tcgacctccg 720
gggtaacagg ctgaaaacgc tgccctatga ggaggctctg gagcaaatcc ctggtattgc 780
ggagatcctg ctagaggata acccttggga ctgcacctgt gatctgctct ccctgaaaga 840
atggctggaa aacattccca agaatgccct gatcggccga gtggtctgcg aagccccac 900
cagactggag ggtaaaagacc tcaatgaaac caccgaacag gacttgtgtc ctttgaaaaa 960
ccgagtggat tctagtctcc cggcgccccc tgcccaagaa gagacctttg ctctgggacc 1020
cctgccaaact cctttcaaga caaatgggca agaggatcat gccacaccag ggtctgctcc 1080
aaacggaggt acaagatcc caggcaactg gcagatcaaa atcagaccca cagcagcgat 1140
agcgacgggt agctccagga acaaaccctt agctaacagt ttaccctgcc ctgggggctg 1200
cagctgcgac cacatccag ggtcgggttt aaagatgaac tgcaacaaca ggaacgtgag 1260
cagcttggct gatttgaagc ccaagctctc taacgtgcag gagcttttcc tacgagataa 1320
caagatccac agcatccgaa aatcgcactt tgtggattac aagaacctca ttctgttga 1380
tctgggcaac aataacatcg ctactgtaga gaacaacact ttcaagaacc ttttgaccct 1440
cagggtggcta tacatggata gcaattacct ggacacgctg tcccgggaga aattcgcggg 1500
gctgcaaaac ctagagtacc tgaacgtgga gtacaacgct atccagctca tcctcccggg 1560
cactttcaat gccatgcccc aactgaggat cctcattctc aacaacaacc tgctgagggtc 1620
cctgcctgtg gacgtgttcg ctgggggtctc gctctctaaa ctacgctgc acaacaatta 1680
cttcatgtac ctcccgttgg caggggtgct ggaccagtta acctccatca tccagataga 1740
cctccacgga aacctctggg agtgctcctg cacaattgtg cctttcaagc agtgggcaga 1800
acgcttgggt tccgaagtgc tgatgagcga cctcaagtgt gagacgcggg tgaacttctt 1860
tagaaaggat tcatgtctcc tctccaatga cgagatctgc cctcagctgt acgctaggat 1920
ctcgccacag ttaacttcgc acagtaaaaa cagcactggg ttggcggaga ccgggacgca 1980
ctccaactcc tacctagaca ccagcagggt gtccatctcg gtgttggtcc cgggactgct 2040
gctgggtgtt gtcacctccg ccttcaccgt ggtgggcatg ctctgtttta tcctgaggaa 2100
ccgaaagcgg tccaagagac gagatgccaa ctctcccgcg tccgagatta attccctaca 2160
gacagtctgt gactcttctt actggcacia tgggccttac aacgcagatg gggccacag 2220
agtgtatgac tgtggctctc actcgtctct agactaagac cccaaccca ataggggagg 2280
gcagagggaa ggcatatcat ccttccccac cgcaggcacc ccgggggctg gaggggcgtg 2340
tacccaaata cccgcgccat cagcctggat gggcataagt agataaataa ctgtgagctc 2400
gcacaaccga aagggcctga ccccttactt agctccctcc ttgaaacaaa gagcagactg 2460
tggagagctg ggagagcgca gccagctcgc tctttgctga gagcccttt tgacagaaag 2520
cccagcacga cctgctgga agaactgaca gtgccctcgc cctcgcccc ggggcctgtg 2580
gggttggatg ccgcggttct atacatatat acatatatcc acatctatat agagagatag 2640
atatctattt tccccctgtg gattagcccc gtgatggctc cctgttggct acgcagggat 2700
gggcagttgc acgaaggcat gaatgtattg taaataagta actttgactt ctgac 2755
```

<210> 91
<211> 696
<212> PRT
<213> Homo sapiens

<400> 91

Met	Leu	Leu	Trp	Ile	Leu	Leu	Leu	Glu	Thr	Ser	Leu	Cys	Phe	Ala	Ala	1	5	10				15
Gly	Asn	Val	Thr	Gly	Asp	Val	Cys	Lys	Glu	Lys	Ile	Cys	Ser	Cys	Asn	20		25				30
Glu	Ile	Glu	Gly	Asp	Leu	His	Val	Asp	Cys	Glu	Lys	Lys	Gly	Phe	Thr	35		40				45
Ser	Leu	Gln	Arg	Phe	Thr	Ala	Pro	Thr	Ser	Gln	Phe	Tyr	His	Leu	Phe	50		55				60
Leu	His	Gly	Asn	Ser	Leu	Thr	Arg	Leu	Phe	Pro	Asn	Glu	Phe	Ala	Asn	65		70				75
Phe	Tyr	Asn	Ala	Val	Ser	Leu	His	Met	Glu	Asn	Asn	Gly	Leu	His	Glu	85		90				95
Ile	Val	Pro	Gly	Ala	Phe	Leu	Gly	Leu	Gln	Leu	Val	Lys	Arg	Leu	His	100		105				110
Ile	Asn	Asn	Asn	Lys	Ile	Lys	Ser	Phe	Arg	Lys	Gln	Thr	Phe	Leu	Gly	115		120				125
Leu	Asp	Asp	Leu	Glu	Tyr	Leu	Gln	Ala	Asp	Phe	Asn	Leu	Leu	Arg	Asp	130		135				140
Ile	Asp	Pro	Gly	Ala	Phe	Gln	Asp	Leu	Asn	Lys	Leu	Glu	Val	Leu	Ile	145		150				155
Leu	Asn	Asp	Asn	Leu	Ile	Ser	Thr	Leu	Pro	Ala	Asn	Val	Phe	Gln	Tyr	165		170				175
Val	Pro	Ile	Thr	His	Leu	Asp	Leu	Arg	Gly	Asn	Arg	Leu	Lys	Thr	Leu	180		185				190
Pro	Tyr	Glu	Glu	Val	Leu	Glu	Gln	Ile	Pro	Gly	Ile	Ala	Glu	Ile	Leu	195		200				205
Leu	Glu	Asp	Asn	Pro	Trp	Asp	Cys	Thr	Cys	Asp	Leu	Leu	Ser	Leu	Lys	210		215				220
Glu	Trp	Leu	Glu	Asn	Ile	Pro	Lys	Asn	Ala	Leu	Ile	Gly	Arg	Val	Val	225		230				235
Cys	Glu	Ala	Pro	Thr	Arg	Leu	Gln	Gly	Lys	Asp	Leu	Asn	Glu	Thr	Thr	245		250				255
Glu	Gln	Asp	Leu	Cys	Pro	Leu	Lys	Asn	Arg	Val	Asp	Ser	Ser	Leu	Pro	260		265				270
Ala	Pro	Pro	Ala	Gln	Glu	Glu	Thr	Phe	Ala	Pro	Gly	Pro	Leu	Pro	Thr	275		280				285
Pro	Phe	Lys	Thr	Asn	Gly	Gln	Glu	Asp	His	Ala	Thr	Pro	Gly	Ser	Ala	290		295				300

Pro Asn Gly Gly Thr Lys Ile Pro Gly Asn Trp Gln Ile Lys Ile Arg
 305 310 315 320
 Pro Thr Ala Ala Ile Ala Thr Gly Ser Ser Arg Asn Lys Pro Leu Ala
 325 330 335
 Asn Ser Leu Pro Cys Pro Gly Gly Cys Ser Cys Asp His Ile Pro Gly
 340 345 350
 Ser Gly Leu Lys Met Asn Cys Asn Asn Arg Asn Val Ser Ser Leu Ala
 355 360 365
 Asp Leu Lys Pro Lys Leu Ser Asn Val Gln Glu Leu Phe Leu Arg Asp
 370 375 380
 Asn Lys Ile His Ser Ile Arg Lys Ser His Phe Val Asp Tyr Lys Asn
 385 390 395 400
 Leu Ile Leu Leu Asp Leu Gly Asn Asn Asn Ile Ala Thr Val Glu Asn
 405 410 415
 Asn Thr Phe Lys Asn Leu Leu Asp Leu Arg Trp Leu Tyr Met Asp Ser
 420 425 430
 Asn Tyr Leu Asp Thr Leu Ser Arg Glu Lys Phe Ala Gly Leu Gln Asn
 435 440 445
 Leu Glu Tyr Leu Asn Val Glu Tyr Asn Ala Ile Gln Leu Ile Leu Pro
 450 455 460
 Gly Thr Phe Asn Ala Met Pro Lys Leu Arg Ile Leu Ile Leu Asn Asn
 465 470 475 480
 Asn Leu Leu Arg Ser Leu Pro Val Asp Val Phe Ala Gly Val Ser Leu
 485 490 495
 Ser Lys Leu Ser Leu His Asn Asn Tyr Phe Met Tyr Leu Pro Val Ala
 500 505 510
 Gly Val Leu Asp Gln Leu Thr Ser Ile Ile Gln Ile Asp Leu His Gly
 515 520 525
 Asn Pro Trp Glu Cys Ser Cys Thr Ile Val Pro Phe Lys Gln Trp Ala
 530 535 540
 Glu Arg Leu Gly Ser Glu Val Leu Met Ser Asp Leu Lys Cys Glu Thr
 545 550 555 560
 Pro Val Asn Phe Phe Arg Lys Asp Phe Met Leu Leu Ser Asn Asp Glu
 565 570 575
 Ile Cys Pro Gln Leu Tyr Ala Arg Ile Ser Pro Thr Leu Thr Ser His
 580 585 590
 Ser Lys Asn Ser Thr Gly Leu Ala Glu Thr Gly Thr His Ser Asn Ser
 595 600 605

Tyr Leu Asp Thr Ser Arg Val Ser Ile Ser Val Leu Val Pro Gly Leu
610 615 620

Leu Leu Val Phe Val Thr Ser Ala Phe Thr Val Val Gly Met Leu Val
625 630 635 640

Phe Ile Leu Arg Asn Arg Lys Arg Ser Lys Arg Arg Asp Ala Asn Ser
645 650 655

Ser Ala Ser Glu Ile Asn Ser Leu Gln Thr Val Cys Asp Ser Ser Tyr
660 665 670

Trp His Asn Gly Pro Tyr Asn Ala Asp Gly Ala His Arg Val Tyr Asp
675 680 685

Cys Gly Ser His Ser Leu Ser Asp
690 695

<210> 92
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 92
gttggatctg ggcaacaata ac 22

<210> 93
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 93
attgttggtgc aggctgagtt taag 24

<210> 94
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 94
ggtggctata catggatagc aattacctgg acacgctgtc ccggg 45

<210> 95
<211> 2226
<212> DNA

<213> Homo sapiens

<400> 95

```
agtgcactgc gtcccctgta cccggcgcca gctgtgttcc tgaccccaaga ataactcagg 60
gctgcaccgg gcctggcagc gctccgcaca catttcctgt cgcgccctaa gggaaactgt 120
tgcccgctgg gcccgcgggg ggattcttgg cagttggggg gtccgctcggg agcgagggcg 180
gaggggaagg gagggggaac cgggttgggg aagccagctg tagagggcgg tgaccgcgct 240
ccagacacag ctctgcgtcc tcgagcggga cagatccaag ttgggagcag ctctgcgtgc 300
ggggcctcag agaatgaggc cggcgttcgc cctgtgcctc ctctggcagg cgctctggcc 360
cgggccgggg ggcggcgaac accccactgc cgaccgtgct ggctgctcgg cctcgggggc 420
ctgctacagc ctgcaccacg ctaccatgaa gcggcaggcg gccgaggagg cctgcatact 480
gcgaggtggg gcgctcagca ccgtgcgtgc gggcgccgag ctgcgcgctg tgctcgcgct 540
cctgcgggca ggcccagggc cgggagggg ctccaaagac ctgctgttct gggtcgcaact 600
ggagcgcagg cgttcccact gcaccctgga gaacgagcct ttgcgggggt tctcctggct 660
gtcctccgac cccggcggtc tcgaaagcga cacgctgcag tgggtggagg agccccaacg 720
ctcctgcacc gcgcggagat gcgcggtact ccaggccacc ggtggggtcg agcccgagg 780
ctggaaggag atcgcatgcc acctgcgcgc caacggctac ctgtgcaagt accagtttga 840
ggctcttgtc cctgcgcgcg gcccgggggc cgctctaac ttgagctatc gcgcgccctt 900
ccagctgcac agcgcgcgtc tggacttcag tccactggg accgaggtga gtgcgctctg 960
ccggggacag ctcccgatct cagttacttg catcgcgagc gaaatcgggc ctcgctggga 1020
caaaactctg ggcatgtgt tgtgtcctg ccccgggagg tacctcgtg ctggcaaatg 1080
cgcagagctc ctaactgcc tagacactt gggaggcttt gcctgcgaat gtgctacggg 1140
cttcgagctg gggaaggac gccgctcttg tgtgaccagt ggggaaggac agccgacct 1200
tggggggacc ggggtgccc ccaggcgccc gccggccact gcaaccagcc ccgtgcgca 1260
gagaacatgg ccaatcaggg tcgacgagaa gctgggagag acaccacttg tccctgaaca 1320
agacaattca gtaacatcta ttcctgagat tcctcgatgg ggatcacaga gcacgatgtc 1380
tacccttcaa atgtcccttc aagccgagtc aaaggccact atcaccccat cagggagcgt 1440
gatttccaag tttaattcta cgacttcctc tgccactcct caggttttcg actcctcctc 1500
tgccgtggtc ttcataattg tgagcacagc agtagtagtg ttggtgatct tgaccatgac 1560
agtactgggg ctgttcaagc tctgctttca cgaaagcccc tcttcccagc caaggaagga 1620
gtctatgggc ccgcccgggc tggagagtga tcctgagccc gctgctttgg gctccagttc 1680
tgcacattgc acaacaatg ggggtgaaagt cggggactgt gatctgcggg acagagcaga 1740
gggtgccttg ctggcggagt cccctcttgg ctctagtgat gcatagggaa acaggggaca 1800
tgggcactcc tgtgaacagt ttttcacttt tgatgaaacg gggaaccaag aggaacttac 1860
ttgtgtaact gacaatttct gcagaaatcc ccttcctct aaattccctt tactcactg 1920
aggagctaaa tcagaactgc aactccttc cctgatgata gaggaagtgg aagtgccttt 1980
aggatggtga tactggggga ccgggtagtg ctggggagag atattttctt atgtttattc 2040
ggagaatttg gagaagtgat tgaacttttc aagacattgg aaacaaatag aacacaatat 2100
aatttacatt aaaaaataat ttctacaaa atggaaagga aatgttctat gttgttcagg 2160
ctaggagtat attggttcga aatcccaggg aaaaaataa aaataaaaaa ttaaaggatt 2220
gttgat 2226
```

<210> 96

<211> 490

<212> PRT

<213> Homo sapiens

<400> 96

```
Met Arg Pro Ala Phe Ala Leu Cys Leu Leu Trp Gln Ala Leu Trp Pro
  1              5              10             15

Gly Pro Gly Gly Gly Glu His Pro Thr Ala Asp Arg Ala Gly Cys Ser
      20              25             30

Ala Ser Gly Ala Cys Tyr Ser Leu His His Ala Thr Met Lys Arg Gln
      35              40             45
```

Ala	Ala	Glu	Glu	Ala	Cys	Ile	Leu	Arg	Gly	Gly	Ala	Leu	Ser	Thr	Val	50	55	60	
Arg	Ala	Gly	Ala	Glu	Leu	Arg	Ala	Val	Leu	Ala	Leu	Leu	Arg	Ala	Gly	65	70	75	80
Pro	Gly	Pro	Gly	Gly	Gly	Ser	Lys	Asp	Leu	Leu	Phe	Trp	Val	Ala	Leu	85	90	95	
Glu	Arg	Arg	Arg	Ser	His	Cys	Thr	Leu	Glu	Asn	Glu	Pro	Leu	Arg	Gly	100	105	110	
Phe	Ser	Trp	Leu	Ser	Ser	Asp	Pro	Gly	Gly	Leu	Glu	Ser	Asp	Thr	Leu	115	120	125	
Gln	Trp	Val	Glu	Glu	Pro	Gln	Arg	Ser	Cys	Thr	Ala	Arg	Arg	Cys	Ala	130	135	140	
Val	Leu	Gln	Ala	Thr	Gly	Gly	Val	Glu	Pro	Ala	Gly	Trp	Lys	Glu	Met	145	150	155	160
Arg	Cys	His	Leu	Arg	Ala	Asn	Gly	Tyr	Leu	Cys	Lys	Tyr	Gln	Phe	Glu	165	170	175	
Val	Leu	Cys	Pro	Ala	Pro	Arg	Pro	Gly	Ala	Ala	Ser	Asn	Leu	Ser	Tyr	180	185	190	
Arg	Ala	Pro	Phe	Gln	Leu	His	Ser	Ala	Ala	Leu	Asp	Phe	Ser	Pro	Pro	195	200	205	
Gly	Thr	Glu	Val	Ser	Ala	Leu	Cys	Arg	Gly	Gln	Leu	Pro	Ile	Ser	Val	210	215	220	
Thr	Cys	Ile	Ala	Asp	Glu	Ile	Gly	Ala	Arg	Trp	Asp	Lys	Leu	Ser	Gly	225	230	235	240
Asp	Val	Leu	Cys	Pro	Cys	Pro	Gly	Arg	Tyr	Leu	Arg	Ala	Gly	Lys	Cys	245	250	255	
Ala	Glu	Leu	Pro	Asn	Cys	Leu	Asp	Asp	Leu	Gly	Gly	Phe	Ala	Cys	Glu	260	265	270	
Cys	Ala	Thr	Gly	Phe	Glu	Leu	Gly	Lys	Asp	Gly	Arg	Ser	Cys	Val	Thr	275	280	285	
Ser	Gly	Glu	Gly	Gln	Pro	Thr	Leu	Gly	Gly	Thr	Gly	Val	Pro	Thr	Arg	290	295	300	
Arg	Pro	Pro	Ala	Thr	Ala	Thr	Ser	Pro	Val	Pro	Gln	Arg	Thr	Trp	Pro	305	310	315	320
Ile	Arg	Val	Asp	Glu	Lys	Leu	Gly	Glu	Thr	Pro	Leu	Val	Pro	Glu	Gln	325	330	335	
Asp	Asn	Ser	Val	Thr	Ser	Ile	Pro	Glu	Ile	Pro	Arg	Trp	Gly	Ser	Gln	340	345	350	

Ser Thr Met Ser Thr Leu Gln Met Ser Leu Gln Ala Glu Ser Lys Ala
355 360 365

Thr Ile Thr Pro Ser Gly Ser Val Ile Ser Lys Phe Asn Ser Thr Thr
370 375 380

Ser Ser Ala Thr Pro Gln Ala Phe Asp Ser Ser Ser Ala Val Val Phe
385 390 395 400

Ile Phe Val Ser Thr Ala Val Val Val Leu Val Ile Leu Thr Met Thr
405 410 415

Val Leu Gly Leu Val Lys Leu Cys Phe His Glu Ser Pro Ser Ser Gln
420 425 430

Pro Arg Lys Glu Ser Met Gly Pro Pro Gly Leu Glu Ser Asp Pro Glu
435 440 445

Pro Ala Ala Leu Gly Ser Ser Ser Ala His Cys Thr Asn Asn Gly Val
450 455 460

Lys Val Gly Asp Cys Asp Leu Arg Asp Arg Ala Glu Gly Ala Leu Leu
465 470 475 480

Ala Glu Ser Pro Leu Gly Ser Ser Asp Ala
485 490

<210> 97

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 97

tggaaggaga tgcgatgccca cctg

24

<210> 98

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 98

tgaccagtgg ggaaggacag

20

<210> 99

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 99

acagagcaga ggggtgccttg

20

<210> 100

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 100

tcagggacaa gtggtgtctc tccc

24

<210> 101

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 101

tcaggaagg agtgtgcagt tctg

24

<210> 102

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 102

acagctcccg atctcagtta cttgcacgc ggacgaaac ggcgctcgct

50

<210> 103

<211> 2026

<212> DNA

<213> Homo sapiens

<400> 103

cggacgcgtg ggattcagca gtggcctgtg gctgccagag cagctcctca ggggaaacta 60
agcgtcgagt cagacggcac cataatcgcc tttaaaagt cctccgccct gccggccgcg 120
tatcccccg ctacctgggc cgcgccgcgg cgggtgcgcg gtgagaggga gcgcgcgggc 180
agccgagcgc cgggtgtgagc cagcgtgct gccagtgtga gcggcggtgt gagcgcggtg 240
ggtgcggagg ggcgtgtgtg ccggcgcgcg cgcgtgggg tgcaaaccac gagcgtctac 300
gctgccatga ggggcgcgaa cgcctgggcg ccactctgcc tgctgctggc tgccgccacc 360
cagctctcgc ggcagcagtc cccagagaga cctgttttca catgtggtgg cattcttact 420
ggagagtctg gatttatttg cagtgaaggt tttcctggag tgtaccctcc aaatagcaaa 480
tgtacttgga aaatcacagt tcccgaagga aaagtagtcg ttctcaattt ccgattcata 540

```

gacctcgaga gtgacaacct gtgccgctat gactttgtgg atgtgtacaa tggccatgcc 600
aatggccagc gcattggccg cttctgtggc actttccggc ctggagccct tgtgtccagt 660
ggcaacaaga tgatggtgca gatgatttct gatgccaaca cagctggcaa tggcttcatg 720
gccatgttct ccgctgctga accaaacgaa agaggggatc agtattgtgg aggactcctt 780
gacagacctt ccggtctttt taaaaccccc aactggccag accgggatta ccctgcagga 840
gtcacttggtg tgtggcacat tgtagcccca aagaatcagc ttatagaatt aaagtttgag 900
aagtttgatg tggagcgaga taactactgc cgatatgatt atgtggctgt gtttaatggc 960
ggggaagtca acgatgctag aagaattgga aagtattgtg gtgatatgcc acctgcgcca 1020
attgtgtctg agagaaatga acttcttatt cagtttttat cagacttaag tttaactgca 1080
gatgggttta ttggtcacta catattcagg ccaaaaaaac tgcctacaac tacagaacag 1140
cctgtcacca ccacattccc tgtaaccacg ggttttaaac ccaccgtggc cttgtgtcaa 1200
caaaagtgtg gacggacggg gactctggag ggcaattatt gttcaagtga ctttgtatta 1260
gccggcactg ttatcacaac catcactcgc gatgggagtt tgcacgccac agtctcgatc 1320
atcaacatct acaaagaggg aaatttggcg attcagcagg cgggcaagaa catgagtgcc 1380
aggctgactg tcgtctgcaa gcagtgcctt ctctcagaa gaggtctaaa ttacattatt 1440
atgggccaag taggtgaaga tgggcgaggc aaaatcatgc caaacagctt tatcatgatg 1500
ttcaagacca agaatcagaa gctcctggat gccttaaaaa ataagcaatg ttaacagtga 1560
actgtgtcca tttaagctgt attctgccat tgcctttgaa agatctatgt tctctcagta 1620
gaaaaaaaaa tacttataaa attacatatt ctgaaagagg attccgaaaag atgggactgg 1680
ttgactcttc acatgatgga ggtatgaggg ctccgagata gctgagggaa gttctttgcc 1740
tgctgtcaga ggagcagcta tctgattgga aacctgccga cttagtgcgg tgataggaag 1800
ctaaaagtgt caagcgttga cagcttgga gcgtttattt atacatctct gtaaaaggat 1860
attttagaat tgagttgtgt gaagatgtca aaaaaagatt ttagaagtgc aatatttata 1920
gtgttatttg tttcaccttc aagcctttgc cctgaggtgt tacaatcttg tcttgcgttt 1980
tctaaatcaa tgcttaataa aatattttta aaggaaaaaa aaaaaa 2026

```

```

<210> 104
<211> 415
<212> PRT
<213> Homo sapiens

```

```

<400> 104
Met Arg Gly Ala Asn Ala Trp Ala Pro Leu Cys Leu Leu Leu Ala Ala
  1             5             10             15

Ala Thr Gln Leu Ser Arg Gln Gln Ser Pro Glu Arg Pro Val Phe Thr
          20             25             30

Cys Gly Gly Ile Leu Thr Gly Glu Ser Gly Phe Ile Gly Ser Glu Gly
  35             40             45

Phe Pro Gly Val Tyr Pro Pro Asn Ser Lys Cys Thr Trp Lys Ile Thr
  50             55             60

Val Pro Glu Gly Lys Val Val Val Leu Asn Phe Arg Phe Ile Asp Leu
  65             70             75             80

Glu Ser Asp Asn Leu Cys Arg Tyr Asp Phe Val Asp Val Tyr Asn Gly
          85             90             95

His Ala Asn Gly Gln Arg Ile Gly Arg Phe Cys Gly Thr Phe Arg Pro
          100            105            110

Gly Ala Leu Val Ser Ser Gly Asn Lys Met Met Val Gln Met Ile Ser
          115            120            125

Asp Ala Asn Thr Ala Gly Asn Gly Phe Met Ala Met Phe Ser Ala Ala

```

130	135	140														
Glu	Pro	Asn	Glu	Arg	Gly	Asp	Gln	Tyr	Cys	Gly	Gly	Leu	Leu	Asp	Arg	
145					150					155					160	
Pro	Ser	Gly	Ser	Phe	Lys	Thr	Pro	Asn	Trp	Pro	Asp	Arg	Asp	Tyr	Pro	
				165					170					175		
Ala	Gly	Val	Thr	Cys	Val	Trp	His	Ile	Val	Ala	Pro	Lys	Asn	Gln	Leu	
			180					185					190			
Ile	Glu	Leu	Lys	Phe	Glu	Lys	Phe	Asp	Val	Glu	Arg	Asp	Asn	Tyr	Cys	
	195						200					205				
Arg	Tyr	Asp	Tyr	Val	Ala	Val	Phe	Asn	Gly	Gly	Glu	Val	Asn	Asp	Ala	
	210					215					220					
Arg	Arg	Ile	Gly	Lys	Tyr	Cys	Gly	Asp	Ser	Pro	Pro	Ala	Pro	Ile	Val	
225					230					235					240	
Ser	Glu	Arg	Asn	Glu	Leu	Leu	Ile	Gln	Phe	Leu	Ser	Asp	Leu	Ser	Leu	
			245						250					255		
Thr	Ala	Asp	Gly	Phe	Ile	Gly	His	Tyr	Ile	Phe	Arg	Pro	Lys	Lys	Leu	
		260						265					270			
Pro	Thr	Thr	Thr	Glu	Gln	Pro	Val	Thr	Thr	Thr	Phe	Pro	Val	Thr	Thr	
		275					280					285				
Gly	Leu	Lys	Pro	Thr	Val	Ala	Leu	Cys	Gln	Gln	Lys	Cys	Arg	Arg	Thr	
	290					295					300					
Gly	Thr	Leu	Glu	Gly	Asn	Tyr	Cys	Ser	Ser	Asp	Phe	Val	Leu	Ala	Gly	
305					310					315					320	
Thr	Val	Ile	Thr	Thr	Ile	Thr	Arg	Asp	Gly	Ser	Leu	His	Ala	Thr	Val	
			325						330					335		
Ser	Ile	Ile	Asn	Ile	Tyr	Lys	Glu	Gly	Asn	Leu	Ala	Ile	Gln	Gln	Ala	
			340					345					350			
Gly	Lys	Asn	Met	Ser	Ala	Arg	Leu	Thr	Val	Val	Cys	Lys	Gln	Cys	Pro	
		355					360					365				
Leu	Leu	Arg	Arg	Gly	Leu	Asn	Tyr	Ile	Ile	Met	Gly	Gln	Val	Gly	Glu	
	370					375					380					
Asp	Gly	Arg	Gly	Lys	Ile	Met	Pro	Asn	Ser	Phe	Ile	Met	Met	Phe	Lys	
385				390						395					400	
Thr	Lys	Asn	Gln	Lys	Leu	Leu	Asp	Ala	Leu	Lys	Asn	Lys	Gln	Cys		
			405						410					415		

<210> 105

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 105

ccgattcata gacctcgaga gt

22

<210> 106

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 106

gtcaaggagt cctccacaat ac

22

<210> 107

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 107

gtgtacaatg gccatgccaa tggccagcgc attggccgct tctgt

45

<210> 108

<211> 1838

<212> DNA

<213> Homo sapiens

<400> 108

cggacgcgtg ggcggacgcg tgggcggccc acggcgcccg cgggctgggg cggtcgcttc 60
ttccttctcc gtggcctacg agggtcceca gcctgggtaa agatggcccc atggcccccg 120
aagggcctag tcccagctgt gctctggggc ctcagcctct tcctcaacct cccaggacct 180
atctggctcc agccctctcc acctcccag tcttctcccc cgcctcagcc ccatccgtgt 240
catacctgcc ggggactggt tgacagcttt aacaagggcc tggagagaac catccgggac 300
aactttggag gtggaaacac tgccctgggag gaagagaatt tgtccaaata caaagacagt 360
gagacccgcc tggtagaggt gctggagggg gtgtgcagca agtcagactt cgagtgccac 420
cgcctgctgg agctgagtga ggagctgggt gagagctggt ggtttcacaa gcagcaggag 480
gccccggacc tcttcagtg gctgtgctca gattccctga agctctgctg ccccgagggc 540
accttcgggc cctcctgcct tccctgtcct gggggaacag agaggccctg cggtggctac 600
gggcagtgtg aaggagaagg gacacgaggg ggcagcgggc actgtgactg ccaagccggc 660
tacgggggtg aggcctgtgg ccagtgtggc cttggctact ttgaggcaga acgcaacgcc 720
agccatctgg tatgttcggc ttgttttggc ccctgtgccc gatgtcagg acctgaggaa 780
tcaaactgtt tgcaatgcaa gaagggtctg gccctgcatc acctcaagtg ttagacatt 840
gatgagtgtg gcacagaggg agccaactgt ggagctgacc aattctgcgt gaacactgag 900
ggctcctatg agtgccgaga ctgtgccaaag gcctgcctag gctgcatggg ggcagggcca 960
ggtcgtgtga agaagtgtag ccctggctat cagcaggtgg gctccaagtg tctcgatgtg 1020
gatgagtgtg agacagaggt gtgtccggga gagaacaagc agtgtgaaaa caccgagggc 1080
ggttatcgct gcatctgtgc cgagggtctac aagcagatgg aaggcatctg tgtgaaggag 1140


```

cagatcccag agtcagcagg cttctttctca gagatgacag aagacgagtt ggtgggtgctg 1200
cagcagatgt tctttggcat catcatctgt gcactggcca cgctggctgc taagggcgac 1260
ttggtgttca ccgccatctt cattggggct gtggcggcca tgactggcta ctggttgta 1320
gagcgcagtg accgtgtgct ggagggcttc atcaaggcca gataatcgcg gccaccacct 1380
gtaggacctc ctcccaccca cgctgcccc agagcttggg ctgccctcct gctggacact 1440
caggacagct tggtttattt ttgagagtgg ggtaagcacc cctacctgcc ttacagagca 1500
gcccaggtag ccaggcccg gcagacaagg cccctgggg aaaaagtagc cctgaagggtg 1560
gataccatga gctcttcacc tggcggggac tggcaggctt cacaatgtgt gaatttcaaa 1620
agtttttctt taatgggtggc tgctagagct ttggcccctg cttaggatta ggtggctcctc 1680
acaggggtgg ggccatcaca gctccctcct gccagctgca tgctgccagt tcctgttctg 1740
tgttcaccac atccccacac cccattgcca cttatttatt catctcagga aataaagaaa 1800
ggtcttgga agttaaaaaa aaaaaaaaaa aaaaaaaa 1838

```

<210> 109
 <211> 420
 <212> PRT
 <213> Homo sapiens

```

<400> 109
Met Ala Pro Trp Pro Pro Lys Gly Leu Val Pro Ala Val Leu Trp Gly
  1              5              10              15

Leu Ser Leu Phe Leu Asn Leu Pro Gly Pro Ile Trp Leu Gln Pro Ser
      20              25              30

Pro Pro Pro Gln Ser Ser Pro Pro Pro Gln Pro His Pro Cys His Thr
      35              40              45

Cys Arg Gly Leu Val Asp Ser Phe Asn Lys Gly Leu Glu Arg Thr Ile
      50              55              60

Arg Asp Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Glu Asn Leu
      65              70              75              80

Ser Lys Tyr Lys Asp Ser Glu Thr Arg Leu Val Glu Val Leu Glu Gly
      85              90              95

Val Cys Ser Lys Ser Asp Phe Glu Cys His Arg Leu Leu Glu Leu Ser
      100             105             110

Glu Glu Leu Val Glu Ser Trp Trp Phe His Lys Gln Gln Glu Ala Pro
      115             120             125

Asp Leu Phe Gln Trp Leu Cys Ser Asp Ser Leu Lys Leu Cys Cys Pro
      130             135             140

Ala Gly Thr Phe Gly Pro Ser Cys Leu Pro Cys Pro Gly Gly Thr Glu
      145             150             155             160

Arg Pro Cys Gly Gly Tyr Gly Gln Cys Glu Gly Glu Gly Thr Arg Gly
      165             170             175

Gly Ser Gly His Cys Asp Cys Gln Ala Gly Tyr Gly Gly Glu Ala Cys
      180             185             190

Gly Gln Cys Gly Leu Gly Tyr Phe Glu Ala Glu Arg Asn Ala Ser His
      195             200             205

```

Leu Val Cys Ser Ala Cys Phe Gly Pro Cys Ala Arg Cys Ser Gly Pro
 210 215 220
 Glu Glu Ser Asn Cys Leu Gln Cys Lys Lys Gly Trp Ala Leu His His
 225 230 235 240
 Leu Lys Cys Val Asp Ile Asp Glu Cys Gly Thr Glu Gly Ala Asn Cys
 245 250 255
 Gly Ala Asp Gln Phe Cys Val Asn Thr Glu Gly Ser Tyr Glu Cys Arg
 260 265 270
 Asp Cys Ala Lys Ala Cys Leu Gly Cys Met Gly Ala Gly Pro Gly Arg
 275 280 285
 Cys Lys Lys Cys Ser Pro Gly Tyr Gln Gln Val Gly Ser Lys Cys Leu
 290 295 300
 Asp Val Asp Glu Cys Glu Thr Glu Val Cys Pro Gly Glu Asn Lys Gln
 305 310 315 320
 Cys Glu Asn Thr Glu Gly Gly Tyr Arg Cys Ile Cys Ala Glu Gly Tyr
 325 330 335
 Lys Gln Met Glu Gly Ile Cys Val Lys Glu Gln Ile Pro Glu Ser Ala
 340 345 350
 Gly Phe Phe Ser Glu Met Thr Glu Asp Glu Leu Val Val Leu Gln Gln
 355 360 365
 Met Phe Phe Gly Ile Ile Ile Cys Ala Leu Ala Thr Leu Ala Ala Lys
 370 375 380
 Gly Asp Leu Val Phe Thr Ala Ile Phe Ile Gly Ala Val Ala Ala Met
 385 390 395 400
 Thr Gly Tyr Trp Leu Ser Glu Arg Ser Asp Arg Val Leu Glu Gly Phe
 405 410 415
 Ile Lys Gly Arg
 420

<210> 110

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 110

cctggctatc agcaggtggg ctccaagtgt ctcgatgtgg atgagtgtga

50

<210> 111

<211> 22

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 111
attctgctgtg aacactgagg gc 22

<210> 112
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 112
atctgcttgt agccctcggc ac 22

<210> 113
<211> 1616
<212> DNA
<213> Homo sapiens

<220>
<221> modified_base
<222> (1461)..(1461)
<223> a, t, c or g

<400> 113
tgagaccctc ctgcagcctt ctcaagggac agccccactc tgcctcttgc tcctccaggg 60
cagcaccatg cagccctgtg ggctctgctg ggcactctgg gtgttgcccc tggccagccc 120
cggggccgag ctgaccgggg agcagctcct gggcagcctg ctgcggcagc tgcagctcaa 180
agaggtgccc accctggaca gggccgacat ggaggagctg gtcacccccca cccacgtgag 240
ggcccaagtac gtggccctgc tgcagcgcag ccacggggac cgctcccgcg gaaagagggt 300
cagccagagc ttccgagagg tggccggcag gttcctggcg ttggaggcca gcacacacct 360
gctggtgttc ggcattggagc agcggctgcc gcccaacagc gagctggtgc aggccgtgct 420
gcggctcttc caggagccgg tccccaaagg cgcgctgcac aggcacgggc ggctgtcccc 480
gcgcagcgcc cgggcccggg tgaccgtcga gtggctgcgc gtccgcgacg acggctccaa 540
ccgcacctcc ctcatcgact ccaggctggt gtccgtccac gagagcggct ggaaggcctt 600
cgacgtgacc gaggccgtga acttctggca gcagctgagc cggccccggc agccgtgctg 660
gctacaggtg tcgggtgcaga gggagcatct gggcccgtg gcgtccggcg cccacaagct 720
ggtccgcttt gcctcgcagg gggcgccagc cgggcttggg gagccccagc tggagctgca 780
caccctggac cttggggact atggagctca gggcgactgt gacctgaag caccaatgac 840
cgagggcacc cgctgctgcc gccaggagat gtacattgac ctgcagggga tgaagtgggc 900
cgagaactgg gtgctggagc ccccgggctt cctggcttat gagtgtgtgg gcacctgccg 960
gcagcccccg gaggccctgg ccttcaagtg gccgtttctg gggcctcgac agtgcatcgc 1020
ctcggaact gactcgctgc ccatgatcgt cagcatcaag gagggaggca ggaccaggcc 1080
ccaggtggtc agcctgcccc acatgagggt gcagaagtgc agctgtgcct cggatggtgc 1140
gctcgtgccca aggaggtccc agccataggc gcctagtgtg gccatcgagg gacttgactt 1200
gtgtgtgttt ctgaagtgtt cgagggtacc aggagagctg gcgatgactg aactgctgat 1260
ggacaaatgc tctgtgctct ctagttagcc ctgaatttgc ttctctgac aagttacctc 1320
acctaatttt tgcttctcag gaatgagaat ctttggccac tggagagccc ttgctcagtt 1380
ttctctattc ttattattca ctgcactata ttctaagcac ttacatgtgg agatactgta 1440

acctgagggc agaaagccca ntgtgtcatt gtttacttgt cctgtcactg gatctgggct 1500
aaagtcctcc accaccactc tggacctaag acctgggggtt aagtgtgggt tgtgcatccc 1560
caatccagat aataaagact ttgtaaaaca tgaataaaac acattttatt ctaaaa 1616

<210> 114
<211> 366
<212> PRT
<213> Homo sapiens

<400> 114
Met Gln Pro Leu Trp Leu Cys Trp Ala Leu Trp Val Leu Pro Leu Ala
1 5 10 15
Ser Pro Gly Ala Ala Leu Thr Gly Glu Gln Leu Leu Gly Ser Leu Leu
20 25 30
Arg Gln Leu Gln Leu Lys Glu Val Pro Thr Leu Asp Arg Ala Asp Met
35 40 45
Glu Glu Leu Val Ile Pro Thr His Val Arg Ala Gln Tyr Val Ala Leu
50 55 60
Leu Gln Arg Ser His Gly Asp Arg Ser Arg Gly Lys Arg Phe Ser Gln
65 70 75 80
Ser Phe Arg Glu Val Ala Gly Arg Phe Leu Ala Leu Glu Ala Ser Thr
85 90 95
His Leu Leu Val Phe Gly Met Glu Gln Arg Leu Pro Pro Asn Ser Glu
100 105 110
Leu Val Gln Ala Val Leu Arg Leu Phe Gln Glu Pro Val Pro Lys Ala
115 120 125
Ala Leu His Arg His Gly Arg Leu Ser Pro Arg Ser Ala Arg Ala Arg
130 135 140
Val Thr Val Glu Trp Leu Arg Val Arg Asp Asp Gly Ser Asn Arg Thr
145 150 155 160
Ser Leu Ile Asp Ser Arg Leu Val Ser Val His Glu Ser Gly Trp Lys
165 170 175
Ala Phe Asp Val Thr Glu Ala Val Asn Phe Trp Gln Gln Leu Ser Arg
180 185 190
Pro Arg Gln Pro Leu Leu Leu Gln Val Ser Val Gln Arg Glu His Leu
195 200 205
Gly Pro Leu Ala Ser Gly Ala His Lys Leu Val Arg Phe Ala Ser Gln
210 215 220
Gly Ala Pro Ala Gly Leu Gly Glu Pro Gln Leu Glu Leu His Thr Leu
225 230 235 240
Asp Leu Gly Asp Tyr Gly Ala Gln Gly Asp Cys Asp Pro Glu Ala Pro
245 250 255

Met Thr Glu Gly Thr Arg Cys Cys Arg Gln Glu Met Tyr Ile Asp Leu
260 265 270

Gln Gly Met Lys Trp Ala Glu Asn Trp Val Leu Glu Pro Pro Gly Phe
275 280 285

Leu Ala Tyr Glu Cys Val Gly Thr Cys Arg Gln Pro Pro Glu Ala Leu
290 295 300

Ala Phe Lys Trp Pro Phe Leu Gly Pro Arg Gln Cys Ile Ala Ser Glu
305 310 315 320

Thr Asp Ser Leu Pro Met Ile Val Ser Ile Lys Glu Gly Gly Arg Thr
325 330 335

Arg Pro Gln Val Val Ser Leu Pro Asn Met Arg Val Gln Lys Cys Ser
340 345 350

Cys Ala Ser Asp Gly Ala Leu Val Pro Arg Arg Leu Gln Pro
355 360 365

<210> 115

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 115

aggactgccca taacttgcct g

21

<210> 116

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 116

ataggagttg aagcagcgct gc

22

<210> 117

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 117

tgtgtggaca tagacgagtg ccgctaccgc tactgccagc accgc

45

<210> 118
<211> 1857
<212> DNA
<213> Homo sapiens

<400> 118
gtctgttccc aggagtcctt cggcgggctgt tgtgtcagtgc gcctgatcgc gatgggggaca 60
aaggcgcaag tgcagaggaa actgttgtgc ctcttcataat tggcgatcct gttgtgctcc 120
ctggcattgg gcagtgttac agtgcactct tctgaacctg aagtcagaat tcctgagaat 180
aatcctgtga agttgtcctg tgcctactcg ggcttttctt ctcccctgtg ggagtgggag 240
tttgaccaag gagacaccac cagactcggt tgctataata acaagatcac agcttcctat 300
gaggaccggg tgaccttctt gccaaactggt atcaccttca agtccgtgac acgggaagac 360
actgggacat acacttgtat ggtctctgag gaaggcggca acagctatgg ggaggtcaag 420
gtcaagctca tctgtcttgt gcctccatcc aagcctacag ttaacatccc ctctctgcc 480
accattggga accgggcagt gctgacatgc tcagaacaag atggttcccc accttctgaa 540
tacacctggt tcaaagatgg gatagtgatg cctacgaatc ccaaaagcac ccgtgccttc 600
agcaactctt cctatgtcct gaatcccaca acaggagagc tggcttttga tcccctgtca 660
gcctctgata ctggagaata cagctgtgag gcacggaatg ggtatgggac acccatgact 720
tcaaagtctg tgcgcatgga agctgtggag cggaatgtgg gggatcatcg ggagccgctc 780
cttctaaccg tgattctcct gggaatcttg gtttttggca tctggtttgc ctatagccga 840
ggccactttg acagaacaaa gaaagggact tcgagtaaga aggtgattta cagccagcct 900
agtgcgccga gtgaaggaga attcaaacag acctcgatc tctgtgtgtg agcctggctg 960
gctcaccgct tatcatctgc atttgcctta ctcagggtgct accggactct ggcccctgat 1020
gtctgtagtt tcacaggatg ccttatttctt cttctacacc ccacagggcc ccctacttct 1080
tcggatgtgt ttttaataat gtcagctatg tgccccatcc tccttcatgc cctccctccc 1140
tttccctacca ctgctgagtgc gcctggaact tgttttaaagt gtttattccc catttctttg 1200
agggatcagg aaggaatcct gggtatgcca ttgacttccc ttctaagtag acagcaaaaa 1260
tggcgggggt cgcaggaatc tgcactcaac tgcccacctg gctggcaggg atctttgaat 1320
aggtatcttg agcttggttc tgggctcttt ccttgtgtac tgacgaccag ggccagctgt 1380
tctagagcgg gaattagagg cttagagcggc tgaaatgggt gtttgggtgat gacactgggg 1440
tccttccatc tctggggccc actctcttct gtcttcccat gggaagtgcc actgggatcc 1500
ctctgccctg tcttctgaa tacaagctga ctgacattga ctgtgtctgt ggaaaatggg 1560
agctcttgtt gtggagagca tagtaaaatt tcagagaact tgaagccaaa aggatattaa 1620
accgctgctc taaagaaaag aaaactggag gctgggcgca gtggctcacg cctgtaatcc 1680
cagaggctga ggcaggcgga tcacctgagg tcgggagttc gggatcagcc tgaccaacat 1740
ggagaaaccc tactggaaat acaaagttag ccaggcatgg tgggtcatgc ctgtagtccc 1800
agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaa aaaaaaa 1857

<210> 119
<211> 299
<212> PRT
<213> Homo sapiens

<400> 119
Met Gly Thr Lys Ala Gln Val Glu Arg Lys Leu Leu Cys Leu Phe Ile
1 5 10 15
Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His
20 25 30
Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu
35 40 45
Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe
50 55 60

Asp	Gln	Gly	Asp	Thr	Thr	Arg	Leu	Val	Cys	Tyr	Asn	Asn	Lys	Ile	Thr
65					70					75					80
Ala	Ser	Tyr	Glu	Asp	Arg	Val	Thr	Phe	Leu	Pro	Thr	Gly	Ile	Thr	Phe
				85					90					95	
Lys	Ser	Val	Thr	Arg	Glu	Asp	Thr	Gly	Thr	Tyr	Thr	Cys	Met	Val	Ser
			100					105					110		
Glu	Glu	Gly	Gly	Asn	Ser	Tyr	Gly	Glu	Val	Lys	Val	Lys	Leu	Ile	Val
		115					120					125			
Leu	Val	Pro	Pro	Ser	Lys	Pro	Thr	Val	Asn	Ile	Pro	Ser	Ser	Ala	Thr
	130					135					140				
Ile	Gly	Asn	Arg	Ala	Val	Leu	Thr	Cys	Ser	Glu	Gln	Asp	Gly	Ser	Pro
145					150					155					160
Pro	Ser	Glu	Tyr	Thr	Trp	Phe	Lys	Asp	Gly	Ile	Val	Met	Pro	Thr	Asn
				165					170					175	
Pro	Lys	Ser	Thr	Arg	Ala	Phe	Ser	Asn	Ser	Ser	Tyr	Val	Leu	Asn	Pro
			180					185					190		
Thr	Thr	Gly	Glu	Leu	Val	Phe	Asp	Pro	Leu	Ser	Ala	Ser	Asp	Thr	Gly
		195					200						205		
Glu	Tyr	Ser	Cys	Glu	Ala	Arg	Asn	Gly	Tyr	Gly	Thr	Pro	Met	Thr	Ser
	210					215					220				
Asn	Ala	Val	Arg	Met	Glu	Ala	Val	Glu	Arg	Asn	Val	Gly	Val	Ile	Val
225					230					235					240
Ala	Ala	Val	Leu	Val	Thr	Leu	Ile	Leu	Leu	Gly	Ile	Leu	Val	Phe	Gly
				245					250					255	
Ile	Trp	Phe	Ala	Tyr	Ser	Arg	Gly	His	Phe	Asp	Arg	Thr	Lys	Lys	Gly
			260					265					270		
Thr	Ser	Ser	Lys	Lys	Val	Ile	Tyr	Ser	Gln	Pro	Ser	Ala	Arg	Ser	Glu
		275					280					285			
Gly	Glu	Phe	Lys	Gln	Thr	Ser	Ser	Phe	Leu	Val					
	290					295									

<210> 120

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 120

tcgcggagct gtgttctgtt tccc

<210> 121
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 121
tgatcgcat ggggacaaag gcgcaagctc gagaggaaac tgttgtgcct 50

<210> 122
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 122
acacctggtt caaagatggg 20

<210> 123
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 123
taggaagagt tgctgaaggc acgg 24

<210> 124
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 124
ttgccttact caggtgctac 20

<210> 125
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 125
actcagcagt ggtaggaaag

20

<210> 126
<211> 1210
<212> DNA
<213> Homo sapiens

<400> 126
cagcgcgtgg ccggcgccgc tgtggggaca gcatgagcgg cggttggatg ggcaggttg 60
gagcgtggcg aacagggggt ctgggcctgg cgctgctgct gctgctcggc ctcggactag 120
gcctggaggg cgccgcgagc ccgctttcca ccccgacctc tgcccaggcc gcaggcccca 180
gctcaggctc gtgcccaccc accaagttcc agtgccgcac cagtggctta tgcgtgcccc 240
tcacctggcg ctgcgacagg gacttggact gcagcgatgg cagcgatgag gaggagtga 300
ggattgagcc atgtaccag aaagggcaat gccaccgcc ccctggcctc ccctgccccct 360
gcaccggcgt cagtgactgc tctgggggaa ctgacaagaa actgcgcaac tgcagccgcc 420
tggcctgcct agcaggcgag ctccgttgca cgctgagcga tgactgcatt ccactcacgt 480
ggcgtgcga cggccaccca gactgtcccg actccagcga cgagctcggc tgtggaacca 540
atgagatcct cccggaaggg gatgccacaa ccatggggcc ccctgtgacc ctggagagt 600
tcacctctct caggaatgcc acaaccatgg ggccccctgt gaccctggag agtgtcccct 660
ctgtcgggaa tgccacatcc tcctctgccg gagaccagtc tggaagccca actgcctatg 720
gggttattgc agctgctgcg gtgctcagtg caagcctggt caccgccacc ctccctcttt 780
tgtcctggct ccgagcccag gagcgccctc gccactggg gttactggtg gccatgaagg 840
agtccctgct gctgtcagaa cagaagacct cgctgccctg aggacaagca cttgccacca 900
ccgtcactca gccctgggcg tagccggaca ggaggagagc agtgatgcgg atgggtaccc 960
gggcacacca gccctcagag acctgagttc ttctggccac gtggaacctc gaacccgagc 1020
tcctgcagaa gtggccctgg agattgaggg tccctggaca ctccctatgg agatccgggg 1080
agctaggatg gggaacctgc cacagccaga actgaggggc tggccccagg cagctcccag 1140
ggggtagaac ggccctgtgc ttaagacact ccctgctgcc ccgtctgagg gtggcgatta 1200
aagttgcttc 1210

<210> 127
<211> 282
<212> PRT
<213> Homo sapiens

<400> 127
Met Ser Gly Gly Trp Met Ala Gln Val Gly Ala Trp Arg Thr Gly Ala
1 5 10 15
Leu Gly Leu Ala Leu Leu Leu Leu Gly Leu Gly Leu Gly Leu Glu
20 25 30
Ala Ala Ala Ser Pro Leu Ser Thr Pro Thr Ser Ala Gln Ala Ala Gly
35 40 45
Pro Ser Ser Gly Ser Cys Pro Pro Thr Lys Phe Gln Cys Arg Thr Ser
50 55 60
Gly Leu Cys Val Pro Leu Thr Trp Arg Cys Asp Arg Asp Leu Asp Cys
65 70 75 80
Ser Asp Gly Ser Asp Glu Glu Glu Cys Arg Ile Glu Pro Cys Thr Gln
85 90 95
Lys Gly Gln Cys Pro Pro Pro Pro Gly Leu Pro Cys Pro Cys Thr Gly

100	105	110
Val Ser Asp Cys Ser Gly Gly Thr Asp Lys Lys Leu Arg Asn Cys Ser		
115	120	125
Arg Leu Ala Cys Leu Ala Gly Glu Leu Arg Cys Thr Leu Ser Asp Asp		
130	135	140
Cys Ile Pro Leu Thr Trp Arg Cys Asp Gly His Pro Asp Cys Pro Asp		
145	150	155
Ser Ser Asp Glu Leu Gly Cys Gly Thr Asn Glu Ile Leu Pro Glu Gly		
165	170	175
Asp Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val Thr Ser		
180	185	190
Leu Arg Asn Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val		
195	200	205
Pro Ser Val Gly Asn Ala Thr Ser Ser Ser Ala Gly Asp Gln Ser Gly		
210	215	220
Ser Pro Thr Ala Tyr Gly Val Ile Ala Ala Ala Val Leu Ser Ala		
225	230	235
Ser Leu Val Thr Ala Thr Leu Leu Leu Leu Ser Trp Leu Arg Ala Gln		
245	250	255
Glu Arg Leu Arg Pro Leu Gly Leu Leu Val Ala Met Lys Glu Ser Leu		
260	265	270
Leu Leu Ser Glu Gln Lys Thr Ser Leu Pro		
275	280	

<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 128

aagttccagt gccgcaccag tggc

24

<210> 129

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 129

ttggttccac agccgagctc gtcg

24

<210> 130

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 130

gaggaggagt gcaggattga gccatgtacc cagaaagggc aatgcccacc

50

<210> 131

<211> 1843

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (1837)..(1837)

<223> a, t, c or g

<400> 131

cccacgcgct	cggtctcgct	cgctcgcgca	gcggcggcag	cagaggctcg	gcacagatgc	60
gggttagact	ggcgggggga	ggaggcggag	gaggaagga	agctgcatgc	atgagaccca	120
cagactcttg	caagctggat	gccctctgtg	gatgaaagat	gtatcatgga	atgaaccoga	180
gcaatggaga	tggatttcta	gagcagcagc	agcagcagca	gcaacctcag	tccccccaga	240
gactcttggc	cgtgatcctg	tggtttcagc	tggcgtctgt	cttcggccct	gcacagctca	300
cgggcggggt	cgatgacctt	caagtgtgtg	ctgaccccg	cattcccgag	aatggcttca	360
ggacccccag	cggagggggt	ttctttgaag	gctctgtagc	ccgatttcac	tgccaagacg	420
gattcaagct	gaagggcgct	acaaagagac	tgtgtttgaa	gcattttaat	ggaaccctag	480
gctggatccc	aagtgataat	tccatctgtg	tgcaagaaga	ttgccgtatc	cctcaaatac	540
aagatgctga	gattcataac	aagacatata	gacatggaga	gaagctaata	atcacttgct	600
atgaaggatt	caagatccgg	taccccgacc	tacacaatat	ggtttcatta	tgtcgcgatg	660
atggaacgtg	gaataatctg	cccatctgtc	aaggctgcct	gagacctcta	gcctcttcta	720
atggctatgt	aaacatctct	gagctccaga	cctccttccc	ggtggggact	gtgatctcct	780
atcgctgctt	tcccggattt	aaacttgatg	ggtctgcgta	tcttgagtgc	ttacaaaacc	840
ttatctggtc	gtccagccca	ccccggtgcc	ttgctctgga	agcccaagtc	tgtccactac	900
ctccaatggt	gagtcacgga	gatttcgtct	gccaccgcg	gccttgtag	cgctacaacc	960
acggaactgt	ggtggagttt	tactgcgata	ctggctacag	cctcaccagc	gactacaagt	1020
acatcacctg	ccagtatgga	gagtggtttc	cttcttatca	agtctactgc	atcaaatcag	1080
agcaaacgtg	gccagcacc	catgagaccc	tcttgaccac	gtggaagatt	gtggcggttca	1140
cggcaaccag	tgtgctgctg	gtgctgctgc	tcgtcatcct	ggccaggatg	ttccagacca	1200
agttcaaggc	ccactttccc	cccagggggc	ctccccggag	ttccagcagt	gaccctgact	1260
ttgtggtggt	agacggcgctg	cccgatcatgc	tcccgctcta	tgacgaagct	gtgagtggcg	1320
gcttgagtgc	cttaggcccc	gggtacatgg	cctctgtggg	ccagggctgc	cccttaccog	1380
tggacgacca	gagcccccca	gcataccccg	gctcagggga	cacggacaca	ggcccagggg	1440
agtcagaaac	ctgtgacagc	gtctcaggct	cttctgagct	gctccaaagt	ctgtattcac	1500
ctcccagggtg	ccaagagagc	acccaccctg	cttcggacaa	ccctgacata	attgccagca	1560
cggcagagga	ggtggcatcc	accagcccag	gcattccatca	tgcccactgg	gtgttggttcc	1620
taagaaactg	attgattaaa	aaatttccca	aagtgtcctg	aagtgtctct	tcaaatacat	1680
gttgatctgt	ggagttgatt	cctttccttc	tcttggtttt	agacaaatgt	aaacaaagct	1740
ctgatcctta	aaattgctat	gctgatagag	tggtaggggc	tggaagcttg	atcaagtcct	1800
gtttcttctt	gacacagact	gattaaaaat	taaaagnaaa	aaa		1843

<210> 132
<211> 490
<212> PRT
<213> Homo sapiens

<400> 132

Met	Tyr	His	Gly	Met	Asn	Pro	Ser	Asn	Gly	Asp	Gly	Phe	Leu	Glu	Gln	
1				5					10					15		
Gln	Gln	Gln	Gln	Gln	Gln	Pro	Gln	Ser	Pro	Gln	Arg	Leu	Leu	Ala	Val	
			20					25					30			
Ile	Leu	Trp	Phe	Gln	Leu	Ala	Leu	Cys	Phe	Gly	Pro	Ala	Gln	Leu	Thr	
		35					40					45				
Gly	Gly	Phe	Asp	Asp	Leu	Gln	Val	Cys	Ala	Asp	Pro	Gly	Ile	Pro	Glu	
	50					55				60						
Asn	Gly	Phe	Arg	Thr	Pro	Ser	Gly	Gly	Val	Phe	Phe	Glu	Gly	Ser	Val	
65					70					75					80	
Ala	Arg	Phe	His	Cys	Gln	Asp	Gly	Phe	Lys	Leu	Lys	Gly	Ala	Thr	Lys	
				85					90					95		
Arg	Leu	Cys	Leu	Lys	His	Phe	Asn	Gly	Thr	Leu	Gly	Trp	Ile	Pro	Ser	
			100					105					110			
Asp	Asn	Ser	Ile	Cys	Val	Gln	Glu	Asp	Cys	Arg	Ile	Pro	Gln	Ile	Glu	
		115					120					125				
Asp	Ala	Glu	Ile	His	Asn	Lys	Thr	Tyr	Arg	His	Gly	Glu	Lys	Leu	Ile	
	130					135					140					
Ile	Thr	Cys	His	Glu	Gly	Phe	Lys	Ile	Arg	Tyr	Pro	Asp	Leu	His	Asn	
145					150					155					160	
Met	Val	Ser	Leu	Cys	Arg	Asp	Asp	Gly	Thr	Trp	Asn	Asn	Leu	Pro	Ile	
				165					170					175		
Cys	Gln	Gly	Cys	Leu	Arg	Pro	Leu	Ala	Ser	Ser	Asn	Gly	Tyr	Val	Asn	
			180					185					190			
Ile	Ser	Glu	Leu	Gln	Thr	Ser	Phe	Pro	Val	Gly	Thr	Val	Ile	Ser	Tyr	
		195					200					205				
Arg	Cys	Phe	Pro	Gly	Phe	Lys	Leu	Asp	Gly	Ser	Ala	Tyr	Leu	Glu	Cys	
	210					215					220					
Leu	Gln	Asn	Leu	Ile	Trp	Ser	Ser	Ser	Pro	Pro	Arg	Cys	Leu	Ala	Leu	
225					230					235					240	
Glu	Ala	Gln	Val	Cys	Pro	Leu	Pro	Pro	Met	Val	Ser	His	Gly	Asp	Phe	
				245					250					255		
Val	Cys	His	Pro	Arg	Pro	Cys	Glu	Arg	Tyr	Asn	His	Gly	Thr	Val	Val	
			260					265						270		

Glu Phe Tyr Cys Asp Pro Gly Tyr Ser Leu Thr Ser Asp Tyr Lys Tyr
 275 280 285
 Ile Thr Cys Gln Tyr Gly Glu Trp Phe Pro Ser Tyr Gln Val Tyr Cys
 290 295 300
 Ile Lys Ser Glu Gln Thr Trp Pro Ser Thr His Glu Thr Leu Leu Thr
 305 310 315 320
 Thr Trp Lys Ile Val Ala Phe Thr Ala Thr Ser Val Leu Leu Val Leu
 325 330 335
 Leu Leu Val Ile Leu Ala Arg Met Phe Gln Thr Lys Phe Lys Ala His
 340 345 350
 Phe Pro Pro Arg Gly Pro Pro Arg Ser Ser Ser Ser Asp Pro Asp Phe
 355 360 365
 Val Val Val Asp Gly Val Pro Val Met Leu Pro Ser Tyr Asp Glu Ala
 370 375 380
 Val Ser Gly Gly Leu Ser Ala Leu Gly Pro Gly Tyr Met Ala Ser Val
 385 390 395 400
 Gly Gln Gly Cys Pro Leu Pro Val Asp Asp Gln Ser Pro Pro Ala Tyr
 405 410 415
 Pro Gly Ser Gly Asp Thr Asp Thr Gly Pro Gly Glu Ser Glu Thr Cys
 420 425 430
 Asp Ser Val Ser Gly Ser Ser Glu Leu Leu Gln Ser Leu Tyr Ser Pro
 435 440 445
 Pro Arg Cys Gln Glu Ser Thr His Pro Ala Ser Asp Asn Pro Asp Ile
 450 455 460
 Ile Ala Ser Thr Ala Glu Glu Val Ala Ser Thr Ser Pro Gly Ile His
 465 470 475 480
 His Ala His Trp Val Leu Phe Leu Arg Asn
 485 490

<210> 133

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 133

atctctatc gctgctttcc cgg

23

<210> 134

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 134

agccaggatc gcagtaaaac tcc

23

<210> 135

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 135

atttaaactt gatgggtctg cgtatcttga gtgcttaca aaccttatct

50

<210> 136

<211> 1815

<212> DNA

<213> Homo sapiens

<400> 136

cccacgcgtc	cgctccgcgc	cctccccccc	gcctcccgtg	cggtccgctc	gtggcctaga	60
gatgctgctg	ccgcggttgc	agttgtcgcg	cacgcctctg	cccgccagcc	cgctccaccg	120
ccgtagcgcc	cgagtgtcgg	ggggcgaccc	cgagtcgggc	catgaggccg	ggaaccgcgc	180
tacaggccgt	gctgctggcc	gtgctgctgg	tggggctgcg	ggccgcgacg	ggtcgcctgc	240
tgagtgcctc	ggatttggac	ctcagaggag	ggcagccagt	ctgccgggga	gggacacaga	300
ggccttggtt	taaagtcatt	tacttccatg	atacttctcg	aagactgaac	tttgaggaag	360
ccaaagaagc	ctgcaggagg	gatggaggcc	agctagtcag	catcgagtct	gaagatgaac	420
agaaactgat	agaaaagttc	attgaaaacc	tcttgccatc	tgatggtgac	ttctggattg	480
ggctcaggag	gcgtgaggag	aaacaaagca	atagcacagc	ctgccaggac	ctttatgctt	540
ggactgatgg	cagcatatca	caatttagga	actggtatgt	ggatgagccg	tcctgcgcca	600
gcgagggtct	cgtggtcatg	taccatcagc	catcggcacc	cgctggcatc	ggaggccccct	660
acatgttcca	gtggaatgat	gaccggtgca	acatgaagaa	caatttcatt	tgcaaatatt	720
ctgatgagaa	accagcagtt	ccttctagag	aagctgaagg	tgaggaaaca	gagctgacaa	780
cacctgtact	tcagaagaa	acacaggaag	aagatgccaa	aaaaacattt	aaagaaagta	840
gagaagctgc	cttgaatctg	gcctacatcc	taatccccag	cattcccctt	ctcctcctcc	900
ttgtggtcac	cacagttgta	tgttgggttt	ggatctgtag	aaaaagaaaa	cgggagcagc	960
cagaccctag	cacaaagaag	caacacacca	tctggccctc	tcctcaccag	ggaaacagcc	1020
cggacctaga	ggtctacaat	gtcataagaa	aacaaagcga	agctgactta	gctgagaccc	1080
ggccagacct	gaagaatatt	tcattccgag	tgtgttcggg	agaagccact	cccgatgaca	1140
tgtcttgtga	ctatgacaac	atggctgtga	acccatcaga	aagtgggttt	gtgactctgg	1200
tgagcgtgga	gagtggattt	gtgaccaatg	acatttatga	gttctcccca	gaccaaattg	1260
ggaggagtaa	ggagtctgga	tgggtggaaa	atgaaatata	tggttattag	gacatataaa	1320
aaactgaaac	tgacaacaat	ggaaaagaaa	tgataagcaa	aatcctctta	ttttctataa	1380
ggaaaataca	cagaaggtct	atgaacaagc	ttagatcagg	tcctgtggat	gagcatgtgg	1440
tccccacgac	ctcctgtttg	acccccacgt	tttggtgta	tcctttatcc	cagccagtca	1500
tccagctcga	ccttatgaga	aggtaccttg	cccaggctcg	gcacatagta	gagtctcaat	1560
aaatgtcact	tggttggttg	tatctaactt	ttaagggaca	gagctttacc	tggcagtgat	1620
aaagatgggc	tgtggagctt	ggaaaaccac	ctctgttttc	cttgctctat	acagcagcac	1680
atattatcat	acagacagaa	aatccagaat	cttttcaaag	cccacatatg	gtagcacagg	1740
ttggcctgtg	catcggcaat	tctcatatct	gtttttttca	aagaataaaa	tcaaataaag	1800

agcaggaaaa aaaaa

1815

<210> 137

<211> 382

<212> PRT

<213> Homo sapiens

<400> 137

Met Arg Pro Gly Thr Ala Leu Gln Ala Val Leu Leu Ala Val Leu Leu
1 5 10 15

Val Gly Leu Arg Ala Ala Thr Gly Arg Leu Leu Ser Ala Ser Asp Leu
20 25 30

Asp Leu Arg Gly Gly Gln Pro Val Cys Arg Gly Gly Thr Gln Arg Pro
35 40 45

Cys Tyr Lys Val Ile Tyr Phe His Asp Thr Ser Arg Arg Leu Asn Phe
50 55 60

Glu Glu Ala Lys Glu Ala Cys Arg Arg Asp Gly Gly Gln Leu Val Ser
65 70 75 80

Ile Glu Ser Glu Asp Glu Gln Lys Leu Ile Glu Lys Phe Ile Glu Asn
85 90 95

Leu Leu Pro Ser Asp Gly Asp Phe Trp Ile Gly Leu Arg Arg Arg Glu
100 105 110

Glu Lys Gln Ser Asn Ser Thr Ala Cys Gln Asp Leu Tyr Ala Trp Thr
115 120 125

Asp Gly Ser Ile Ser Gln Phe Arg Asn Trp Tyr Val Asp Glu Pro Ser
130 135 140

Cys Gly Ser Glu Val Cys Val Val Met Tyr His Gln Pro Ser Ala Pro
145 150 155 160

Ala Gly Ile Gly Gly Pro Tyr Met Phe Gln Trp Asn Asp Asp Arg Cys
165 170 175

Asn Met Lys Asn Asn Phe Ile Cys Lys Tyr Ser Asp Glu Lys Pro Ala
180 185 190

Val Pro Ser Arg Glu Ala Glu Gly Glu Glu Thr Glu Leu Thr Thr Pro
195 200 205

Val Leu Pro Glu Glu Thr Gln Glu Glu Asp Ala Lys Lys Thr Phe Lys
210 215 220

Glu Ser Arg Glu Ala Ala Leu Asn Leu Ala Tyr Ile Leu Ile Pro Ser
225 230 235 240

Ile Pro Leu Leu Leu Leu Val Val Thr Thr Val Val Cys Trp Val
245 250 255

Trp Ile Cys Arg Lys Arg Lys Arg Glu Gln Pro Asp Pro Ser Thr Lys

260										265					270															
Lys	Gln	His	Thr	Ile	Trp	Pro	Ser	Pro	His	Gln	Gly	Asn	Ser	Pro	Asp															
		275					280					285																		
Leu	Glu	Val	Tyr	Asn	Val	Ile	Arg	Lys	Gln	Ser	Glu	Ala	Asp	Leu	Ala															
	290					295					300																			
Glu	Thr	Arg	Pro	Asp	Leu	Lys	Asn	Ile	Ser	Phe	Arg	Val	Cys	Ser	Gly															
305					310					315					320															
Glu	Ala	Thr	Pro	Asp	Asp	Met	Ser	Cys	Asp	Tyr	Asp	Asn	Met	Ala	Val															
				325					330					335																
Asn	Pro	Ser	Glu	Ser	Gly	Phe	Val	Thr	Leu	Val	Ser	Val	Glu	Ser	Gly															
			340					345					350																	
Phe	Val	Thr	Asn	Asp	Ile	Tyr	Glu	Phe	Ser	Pro	Asp	Gln	Met	Gly	Arg															
	355					360						365																		
Ser	Lys	Glu	Ser	Gly	Trp	Val	Glu	Asn	Glu	Ile	Tyr	Gly	Tyr																	
	370					375					380																			

<210> 138

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 138

gttcattgaa aacctcttgc catctgatgg tgacttctgg attgggctca

50

<210> 139

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 139

aagccaaaga agcctgcagg aggg

24

<210> 140

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 140

cagtccaagc ataaaggtcc tggc

24

<210> 141
<211> 1514
<212> DNA
<213> Homo sapiens

<400> 141
gggggtctccc tcaggggccgg gaggcacagc ggtccctgct tgctgaaggg ctggatgtac 60
gcatccgcag gttcccgcg acttgggggc gcccgctgag ccccggcgcc cgcagaagac 120
ttgtgtttgc ctctgcagc ctcaaccgg agggcagcga gggcctacca ccatgatcac 180
tgggtgtgttc agcatgcgct tgtggacccc agtgggctc ctgacctcgc tggcgctactg 240
cctgcaccag cggcggttg ccctggccga gctgcaggag gccgatggcc agtgtccggt 300
cgaccgcagc ctgctgaagt tgaaaatggt gcaggtcgtg tttcgacacg gggctcggag 360
tcctctcaag ccgctcccgc tggaggagca ggtagagtgg aacccccagc tattagaggt 420
cccaccccaa actcagtttg attacacagt caccaatcta gctggtggtc cgaaaccata 480
ttctccttac gactctcaat accatgagac caccctgaag gggggcatgt ttgctgggca 540
gctgaccaag gtgggcatgc agcaaagtgt tgccttgga gagagactga ggaagaacta 600
tgtggaagac attccctttc tttcaccaac cttcaaccca caggaggtct ttattcggtc 660
cactaacatt tttcggaatc tggagtccac ccgttggttg ctggctgggc ttttccagtg 720
tcagaaagaa ggacccatca tcatccacac tgatgaagca gattcagaag tcttgtatcc 780
caactaccaa agctgctgga gcctgaggca gagaaccaga ggccggaggc agactgcctc 840
tttacagcca ggaatctcag aggatttgaa aaaggtgaag gacaggatgg gcattgacag 900
tagtgataaa gtggacttct tcatcctcct ggacaacgtg gctgccgagc aggcacacaa 960
cctcccaagc tgccccatgc tgaagagatt tgcacggatg atcgaacaga gagctgtgga 1020
cacatccttg tacatactgc ccaaggaaga cagggaagt cttcagatgg cagtaggccc 1080
attcctccac atcctagaga gcaacctgct gaaagccatg gactctgcca ctgcccccca 1140
caagatcaga aagctgtatc tctatgcggc tcatgatgtg accttcatac cgctcttaat 1200
gaccctgggg atttttgacc acaaattggc accgtttgct gttgacctga ccatggaact 1260
ttaccagcac ctggaatcta aggagtgggt tgtgcagctc tattaccacg ggaaggagca 1320
ggtgccgaga ggttgccctg atgggctctg cccgctggac atgttcttga atgccatgtc 1380
agtttatacc ttaagccag aaaaatacca tgcactctgc tctcaaactc aggtgatgga 1440
agttggaaat gaagagtaac tgatttataa aagcaggatg tgttgatttt aaaataaagt 1500
gcctttatac aatg 1514

<210> 142
<211> 428
<212> PRT
<213> Homo sapiens

<400> 142
Met Ile Thr Gly Val Phe Ser Met Arg Leu Trp Thr Pro Val Gly Val
1 5 10 15
Leu Thr Ser Leu Ala Tyr Cys Leu His Gln Arg Arg Val Ala Leu Ala
20 25 30
Glu Leu Gln Glu Ala Asp Gly Gln Cys Pro Val Asp Arg Ser Leu Leu
35 40 45
Lys Leu Lys Met Val Gln Val Val Phe Arg His Gly Ala Arg Ser Pro
50 55 60
Leu Lys Pro Leu Pro Leu Glu Glu Gln Val Glu Trp Asn Pro Gln Leu
65 70 75 80
Leu Glu Val Pro Pro Gln Thr Gln Phe Asp Tyr Thr Val Thr Asn Leu

85

90

95

Ala	Gly	Gly	Pro	Lys	Pro	Tyr	Ser	Pro	Tyr	Asp	Ser	Gln	Tyr	His	Glu
			100					105					110		
Thr	Thr	Leu	Lys	Gly	Gly	Met	Phe	Ala	Gly	Gln	Leu	Thr	Lys	Val	Gly
		115					120					125			
Met	Gln	Gln	Met	Phe	Ala	Leu	Gly	Glu	Arg	Leu	Arg	Lys	Asn	Tyr	Val
	130					135					140				
Glu	Asp	Ile	Pro	Phe	Leu	Ser	Pro	Thr	Phe	Asn	Pro	Gln	Glu	Val	Phe
145					150					155					160
Ile	Arg	Ser	Thr	Asn	Ile	Phe	Arg	Asn	Leu	Glu	Ser	Thr	Arg	Cys	Leu
				165					170					175	
Leu	Ala	Gly	Leu	Phe	Gln	Cys	Gln	Lys	Glu	Gly	Pro	Ile	Ile	Ile	His
			180					185					190		
Thr	Asp	Glu	Ala	Asp	Ser	Glu	Val	Leu	Tyr	Pro	Asn	Tyr	Gln	Ser	Cys
	195						200					205			
Trp	Ser	Leu	Arg	Gln	Arg	Thr	Arg	Gly	Arg	Arg	Gln	Thr	Ala	Ser	Leu
	210					215					220				
Gln	Pro	Gly	Ile	Ser	Glu	Asp	Leu	Lys	Lys	Val	Lys	Asp	Arg	Met	Gly
225					230					235					240
Ile	Asp	Ser	Ser	Asp	Lys	Val	Asp	Phe	Phe	Ile	Leu	Leu	Asp	Asn	Val
				245					250					255	
Ala	Ala	Glu	Gln	Ala	His	Asn	Leu	Pro	Ser	Cys	Pro	Met	Leu	Lys	Arg
			260					265					270		
Phe	Ala	Arg	Met	Ile	Glu	Gln	Arg	Ala	Val	Asp	Thr	Ser	Leu	Tyr	Ile
	275						280					285			
Leu	Pro	Lys	Glu	Asp	Arg	Glu	Ser	Leu	Gln	Met	Ala	Val	Gly	Pro	Phe
	290					295					300				
Leu	His	Ile	Leu	Glu	Ser	Asn	Leu	Leu	Lys	Ala	Met	Asp	Ser	Ala	Thr
305					310					315					320
Ala	Pro	Asp	Lys	Ile	Arg	Lys	Leu	Tyr	Leu	Tyr	Ala	Ala	His	Asp	Val
			325						330					335	
Thr	Phe	Ile	Pro	Leu	Leu	Met	Thr	Leu	Gly	Ile	Phe	Asp	His	Lys	Trp
			340					345					350		
Pro	Pro	Phe	Ala	Val	Asp	Leu	Thr	Met	Glu	Leu	Tyr	Gln	His	Leu	Glu
		355					360					365			
Ser	Lys	Glu	Trp	Phe	Val	Gln	Leu	Tyr	Tyr	His	Gly	Lys	Glu	Gln	Val
	370					375					380				
Pro	Arg	Gly	Cys	Pro	Asp	Gly	Leu	Cys	Pro	Leu	Asp	Met	Phe	Leu	Asn

385	390	395	400
Ala Met Ser Val Tyr Thr Leu Ser Pro Glu Lys Tyr His Ala Leu Cys			
	405	410	415

Ser Gln Thr Gln Val Met Glu Val Gly Asn Glu Glu
420 425

<210> 143
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 143	
ccaactacca aagctgctgg agcc	24

<210> 144
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 144	
gcagctctat taccacggga agga	24

<210> 145
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 145	
tccttcccgt ggtaatagag ctgc	24

<210> 146
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 146	
ggcagagaac cagaggccgg aggagactgc ctctttacag ccagg	45

<210> 147

<211> 1686
<212> DNA
<213> Homo sapiens

<400> 147

```
ctcctcttaa cataacttgca gctaaaaacta aatattgctg cttgggggacc tccttctagc 60
cttaaatttc agctcatcac cttcacctgc cttggtcctg gctctgctat tctccttgat 120
ccttgccatt tgcaccagac ctggattcct agcgtctcca tctggagtgc ggctgggtggg 180
gggcctccac cgctgtgaag ggcgggtgga ggtggaacag aaaggccagt ggggcaccgt 240
gtgtgatgac ggctgggaca ttaaggacgt ggctgtgttg tgccgggagc tgggctgttg 300
agctgccagc ggaaccccta gtggtatatt gtatgagcca ccagcagaaa aagagcaaaa 360
ggtcctcadc caatcagtcg gttgcacagg aacagaagat acattggctc agtgtgagca 420
agaagaagtt tatgattggt cacatgatga agatgctggg gcatcgtgtg agaaccacaga 480
gagctctttc tccccagtc cagagggtgt caggctggct gacggccctg ggcattgcaa 540
gggacgcgtg gaagtgaagc accagaacca gtgtgatacc gtgtgccaga caggctggag 600
cctccgggcc gcaaagggtg tgtgccggca gctgggatgt gggagggtctg tactgactca 660
aaaacgctgc aacaagcatg cctatggccg aaaacccatc tggctgagcc agatgtcatg 720
ctcaggacga gaagcaaccc ttcaggattg cccttctggg ccttggggga agaacacctg 780
caacatgat gaagacacgt gggtcgaatg tgaagatccc tttgacttga gactagtagg 840
aggagacaac ctctgctctg ggcgactgga ggtgctgcac aagggcgtat ggggctctgt 900
ctgtgatgac aactggggag aaaaggagga ccagggtgta tgcaagcaac tgggctgttg 960
gaagtcctc tctccctcct tcagagaccg gaaatgctat ggcctgggg ttggccgcat 1020
ctggctggat aatgttcgtt gctcagggga ggagcagtc ctggagcagt gccagcacag 1080
atcttggggg tttcacgact gcacccacca ggaagatgtg gctgtcatct gctcagtgtg 1140
gggtgggcac atctaactct ttgagtgcct gaatagaaga aaaacacaga agaagggagc 1200
atttactgtc tacatgactg catgggatga acactgatct tcttctgccc ttggactggg 1260
acttatactt ggtgccccctg attctcaggc cttcagagtt ggatcagaac ttacaacatc 1320
aggtctagtt ctcaggccat cagacatagt ttggaactac atcaccacct ttcctatgtc 1380
tccacattgc acacagcaga tccccagcct ccataattgt gtgtatcaac tacttaaata 1440
cattctcaca cacacacaca cacacacaca cacacacaca ccacataca ccatttgtcc 1500
tgtttctctg aagaactctg acaaaataca gatttttgta ctgaaagaga ttctagagga 1560
acggaatttt aaggataaat tttctgaatt ggttatgggg tttctgaaat tggctctata 1620
atctaattag atataaaaatt ctggttaactt tatttacaat aataaagata gcactatgtg 1680
ttcaaa 1686
```

<210> 148
<211> 347
<212> PRT
<213> Homo sapiens

<400> 148

```
Met Ala Leu Leu Phe Ser Leu Ile Leu Ala Ile Cys Thr Arg Pro Gly
 1             5             10             15

Phe Leu Ala Ser Pro Ser Gly Val Arg Leu Val Gly Gly Leu His Arg
      20             25             30

Cys Glu Gly Arg Val Glu Val Glu Gln Lys Gly Gln Trp Gly Thr Val
      35             40             45

Cys Asp Asp Gly Trp Asp Ile Lys Asp Val Ala Val Leu Cys Arg Glu
      50             55             60

Leu Gly Cys Gly Ala Ala Ser Gly Thr Pro Ser Gly Ile Leu Tyr Glu
      65             70             75             80

Pro Pro Ala Glu Lys Glu Gln Lys Val Leu Ile Gln Ser Val Ser Cys
```


oligonucleotide probe

<400> 149

ttcagctcat caccttcacc tgcc

24

<210> 150

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 150

ggctcataca aaataccact aggg

24

<210> 151

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 151

gggcctccac cgctgtgaag ggcggtgga ggtggaacag aaaggccagt

50

<210> 152

<211> 1427

<212> DNA

<213> Homo sapiens

<400> 152

actgcaactcg	gttctatcga	ttgaattccc	cggggatcct	ctagagatcc	ctcgacctcg	60
accacgcgt	ccgcggacgc	gtgggaggac	gcgtgggccc	gctaccagga	agagtctgcc	120
gaaggtgaag	gccatggact	tcatcacctc	cacagccatc	ctgcccctgc	tggtcggctg	180
cctgggctgc	ttcggcctct	tccggctgct	gcagtgggtg	cgcggaagg	cctacctgcg	240
gaatgctgtg	gtggtgatca	caggcgccac	ctcagggtg	ggcaaagaat	gtgcaaaagt	300
cttctatgct	gcgggtgcta	aactggtgct	ctgtggccgg	aatggtggg	ccctagaaga	360
gctcatcaga	gaacttaccg	cttctcatgc	caccaagggtg	cagacacaca	agccttactt	420
ggtgaccttc	gacctcacag	actctggggc	catagtgtga	gcagcagctg	agatcctgca	480
gtgctttggc	tatgtcgaca	tacttgtcaa	caatgctggg	atcagctacc	gtggtaccat	540
catggacacc	acagtggatg	tggacaagag	ggtcatggag	acaaactact	ttggcccagt	600
tgctctaacg	aaagcactcc	tgccctccat	gatcaagagg	aggcaaggcc	acattgtcgc	660
catcagcagc	atccagggca	agatgagcat	tccttttcga	tcagcatatg	cagcctccaa	720
gcacgcaacc	caggctttct	ttgactgtct	gcgtgccgag	atggaacagt	atgaaattga	780
ggtgaccgtc	atcagccccg	gctacatcca	caccaacctc	tctgtaaagt	ccatcaccgc	840
ggatggatct	aggtatggag	ttatggacac	caccacagcc	cagggccgaa	gccctgtgga	900
ggtggcccag	gatgttcttg	ctgctgtggg	gaagaagaag	aaagatgtga	tcctggctga	960
cttactgcct	tccttggtcg	tttatcttcg	aactctggct	cctgggctct	tcttcagcct	1020
catggcctcc	agggccagaa	aagagcggaa	atccaagaac	tcctagtact	ctgaccagcc	1080
agggccaggg	cagagaagca	gcactcttag	gcttgcttac	tctacaaggg	acagttgcat	1140
ttgttgagac	tttaattggag	atttgtctca	caagtgggaa	agactgaaga	aacacatctc	1200
gtgcagatct	gctggcagag	gacaatcaaa	aacgacaaca	agcttcttcc	caggggtgagg	1260
ggaaacactt	aaggaataaa	tatggagctg	gggtttaaca	ctaaaaacta	gaaataaaca	1320

tctcaaacag taaaaaaaaa aaaaaagggc ggccgcgact ctagagtcga cctgcagaag 1380
 cttggccgcc atggcccaac ttgtttattg cagcttataa tgggttac 1427

<210> 153
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 153

Met	Asp	Phe	Ile	Thr	Ser	Thr	Ala	Ile	Leu	Pro	Leu	Leu	Phe	Gly	Cys	1	5	10	15
Leu	Gly	Val	Phe	Gly	Leu	Phe	Arg	Leu	Leu	Gln	Trp	Val	Arg	Gly	Lys	20	25	30	
Ala	Tyr	Leu	Arg	Asn	Ala	Val	Val	Val	Ile	Thr	Gly	Ala	Thr	Ser	Gly	35	40	45	
Leu	Gly	Lys	Glu	Cys	Ala	Lys	Val	Phe	Tyr	Ala	Ala	Gly	Ala	Lys	Leu	50	55	60	
Val	Leu	Cys	Gly	Arg	Asn	Gly	Gly	Ala	Leu	Glu	Glu	Leu	Ile	Arg	Glu	65	70	75	80
Leu	Thr	Ala	Ser	His	Ala	Thr	Lys	Val	Gln	Thr	His	Lys	Pro	Tyr	Leu	85	90	95	
Val	Thr	Phe	Asp	Leu	Thr	Asp	Ser	Gly	Ala	Ile	Val	Ala	Ala	Ala	Ala	100	105	110	
Glu	Ile	Leu	Gln	Cys	Phe	Gly	Tyr	Val	Asp	Ile	Leu	Val	Asn	Asn	Ala	115	120	125	
Gly	Ile	Ser	Tyr	Arg	Gly	Thr	Ile	Met	Asp	Thr	Thr	Val	Asp	Val	Asp	130	135	140	
Lys	Arg	Val	Met	Glu	Thr	Asn	Tyr	Phe	Gly	Pro	Val	Ala	Leu	Thr	Lys	145	150	155	160
Ala	Leu	Leu	Pro	Ser	Met	Ile	Lys	Arg	Arg	Gln	Gly	His	Ile	Val	Ala	165	170	175	
Ile	Ser	Ser	Ile	Gln	Gly	Lys	Met	Ser	Ile	Pro	Phe	Arg	Ser	Ala	Tyr	180	185	190	
Ala	Ala	Ser	Lys	His	Ala	Thr	Gln	Ala	Phe	Phe	Asp	Cys	Leu	Arg	Ala	195	200	205	
Glu	Met	Glu	Gln	Tyr	Glu	Ile	Glu	Val	Thr	Val	Ile	Ser	Pro	Gly	Tyr	210	215	220	
Ile	His	Thr	Asn	Leu	Ser	Val	Asn	Ala	Ile	Thr	Ala	Asp	Gly	Ser	Arg	225	230	235	240
Tyr	Gly	Val	Met	Asp	Thr	Thr	Thr	Ala	Gln	Gly	Arg	Ser	Pro	Val	Glu	245	250	255	

Val Ala Gln Asp Val Leu Ala Ala Val Gly Lys Lys Lys Lys Asp Val
260 265 270

Ile Leu Ala Asp Leu Leu Pro Ser Leu Ala Val Tyr Leu Arg Thr Leu
275 280 285

Ala Pro Gly Leu Phe Phe Ser Leu Met Ala Ser Arg Ala Arg Lys Glu
290 295 300

Arg Lys Ser Lys Asn Ser
305 310

<210> 154
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 154
ggtgctaaac tgggtgctctg tggc 24

<210> 155
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 155
cagggcaaga tgagcattcc 20

<210> 156
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 156
tcatactgtt ccatctcggc acgc 24

<210> 157
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 157
aatggtgggg ccctagaaga gctcatcaga gaactcaccg cttctcatgc 50

<210> 158
<211> 1771
<212> DNA
<213> Homo sapiens

<400> 158
cccacgcgtc cgctggtggt agatcgagca accctctaaa agcagtttag agtggtaaaa 60
aaaaaaaaaa acacaccaaa cgctcgcagc cacaaaaggg atgaaatttc ttctggacat 120
cctcctgctt ctcccgttac tgatcgtctg ctccctagag tccttcgtga agctttttat 180
tcctaagagg agaaaatcag tcaccggcga aatcgtgctg attacaggag ctgggcatgg 240
aattgggaga ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300
tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg gtgccaaggt 360
tcataccttt gtggtagact gcagcaaccg agaagatatt tacagctctg caaagaaggt 420
gaaggcagaa attggagatg ttagtatttt agtaaataat gctggtgtag tctatacatc 480
agatttggtt gctacacaag atcctcagat tgaaaagact tttgaagtta atgtacttgc 540
acatttctgg actacaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600
tgtcactgtg gcttcggcag ctggacatgt ctcggtcccc ttcttactgg cttactgttc 660
aagcaagttt gctgctggtg gatttcataa aactttgaca gatgaactgg ctgccttaca 720
aataactgga gtcaaaacaa catgtctgtg tcctaatttc gtaaactactg gcttcatcaa 780
aaatccaagt acaagtttgg gaccactctt ggaacctgag gaagtggtaa acaggctgat 840
gcatgggatt ctgactgagc agaagatgat ttttattcca tcttctatag cttttttaac 900
aacattggaa aggatccttc ctgagcgttt cctggcagtt ttaaaacgaa aaatcagtg 960
taagtttgat gcagttattg gatataaaat gaaagcgcaa taagcaccta gttttctgaa 1020
aactgattta ccaggtttag gttgatgtca tctaatagtg ccagaatttt aatgtttgaa 1080
cttctgtttt ttctaattat cccatttctt tcaatatcat ttttgaggct ttggcagtct 1140
tcatttacta ccacttgttc ttttagccaa agctgattac atatgatata aacagagaaa 1200
tacctttaga ggtgacttta aggaaaatga agaaaaagaa ccaaaatgac tttattaaaa 1260
taattttcaa gattatttgt ggctcacctg aaggctttgc aaaatttgta ccataaccgt 1320
ttatttaaca tatattttta tttttgattg cacttaaatt ttgtataatt tgtgtttctt 1380
tttctgttct acataaaatc agaaacttca agctctctaa ataaaatgaa ggactatatc 1440
tagtggtatt tcacaatgaa tatcatgaac tctcaatggg taggtttcat cctaccatt 1500
gccactctgt ttcttgagag atacctcaca ttccaatgcc aaacatttct gcacagggaa 1560
gctagagggtg gatacacgtg ttgcaagtat aaaagcatca ctgggattta aggagaattg 1620
agagaatgta cccacaaatg gcagcaataa taaatggatc acacttaaaa aaaaaaaaaa 1680
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1740
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a a 1771

<210> 159
<211> 300
<212> PRT
<213> Homo sapiens

<400> 159
Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Leu Pro Leu Leu Ile Val
1 5 10 15
Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg Arg Lys
20 25 30
Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45
Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys Ser Lys Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu Thr Ala Ala Lys Cys
 65 70 75 80
 Lys Gly Leu Gly Ala Lys Val His Thr Phe Val Val Asp Cys Ser Asn
 85 90 95
 Arg Glu Asp Ile Tyr Ser Ser Ala Lys Lys Val Lys Ala Glu Ile Gly
 100 105 110
 Asp Val Ser Ile Leu Val Asn Asn Ala Gly Val Val Tyr Thr Ser Asp
 115 120 125
 Leu Phe Ala Thr Gln Asp Pro Gln Ile Glu Lys Thr Phe Glu Val Asn
 130 135 140
 Val Leu Ala His Phe Trp Thr Thr Lys Ala Phe Leu Pro Ala Met Thr
 145 150 155 160
 Lys Asn Asn His Gly His Ile Val Thr Val Ala Ser Ala Ala Gly His
 165 170 175
 Val Ser Val Pro Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala
 180 185 190
 Val Gly Phe His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile
 195 200 205
 Thr Gly Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly
 210 215 220
 Phe Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu
 225 230 235 240
 Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys Met
 245 250 255
 Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu Arg Ile
 260 265 270
 Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile Ser Val Lys
 275 280 285
 Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln
 290 295 300

<210> 160

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 160

ggtgaaggca gaaattggag atg

<210> 161
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 161
atcccatgca tcagcctggt tacc 24

<210> 162
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 162
gctggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 163
<211> 2076
<212> DNA
<213> Homo sapiens

<400> 163
cccacgcgtc cgcggacgcg tgggtcgact agttctagat cgcgagcggc cgcccgcggc 60
tcaggagga gcaccgactg cgccgcaccc tgagagatgg ttggtgccat gtggaagggtg 120
attgtttcgc tggctcgtgt gatgcctggc ccctgtgatg ggctgtttcg ctccctatac 180
agaagtgttt ccatgccacc taagggagac tcaggacagc cattatttct cacccttac 240
attgaagctg ggaagatcca aaaaggaaga gaattgagtt tggtcggccc tttcccagga 300
ctgaacatga agagttatgc cggcttcctc accgtgaata agacttaca cagcaacctc 360
ttcttctggt tcttcccagc tcagatacag ccagaagatg cccagtagt tctctggcta 420
cagggtgggc cgggaggttc atccatgttt ggactctttg tggaacatgg gccttatgtt 480
gtcacaagta acatgacctt gcgtgacaga gacttcccct ggaccacaac gctctccatg 540
ctttacattg acaatccagt gggcacaggc ttcagtttta ctgatgatac ccacggatat 600
gcagtcaatg aggacgatgt agcacgggat ttatacagtg cactaattca gtttttccag 660
atatttcctg aatataaaaa taatgacttt tatgtcactg gggagtctta tgcagggaaa 720
tatgtgccag ccattgcaca cctcatccat tccctcaacc ctgtgagaga ggtgaagatc 780
aacctgaacg gaattgctat tggagatgga tattctgatc ccgaatcaat tatagggggc 840
tatgcagaat tcctgtacca aattggcttg ttggatgaga agcaaaaaaa gtacttccag 900
aagcagtgcc atgaatgcat agaacacatc aggaagcaga actggtttga ggcttttga 960
atactggata aactactaga tggcgactta acaagtgatc cttcttactt ccagaatgtt 1020
acaggatgta gtaattacta taactttttg cgggtgcacgg aacctgagga tcagctttac 1080
tatgtgaaat ttttgtcact cccagaggtg agacaagcca tccacgtggg gaatcagact 1140
tttaatgatg gaactatagt tgaaaagtac ttgcgagaag atacagtaca gtcagttaag 1200
ccatgggtta ctgaaatcat gaataattat aaggttctga tctacaatgg ccaactggac 1260
atcatcgtgg cagctgcctt gacagagcgc tccttgatgg gcatggactg gaaaggatcc 1320
caggaatata agaaggcaga aaaaaaagtt tggaagatct ttaaatctga cagtgaagtg 1380
gctggttaca tccggcaagc ggggtgacttc catcaggtaa ttattcgagg tggaggacat 1440
attttaccct atgaccagcc tctgagagct tttgacatga ttaatcgatt catttatgga 1500
aaaggatggg atccttatgt tggataaact accttcccaa aagagaacat cagagggttt 1560

cattgctgaa aagaaaatcg taaaaacaga aaatgtcata ggaataaaaa aattatcttt 1620
tcatatctgc aagatTTTTT tcatcaataa aaattatcct tgaaacaagt gagcttttgt 1680
ttttgggggg agatgtttac tacaaaatta acatgagtag atgagtaaga attacattat 1740
ttaacttaaa ggatgaaagg tatggatgat gtgacactga gacaagatgt ataaatgaaa 1800
ttttagggtc ttgaatagga agttttaatt tcttctaaga gtaagtgaaa agtgcagttg 1860
taacaaacaa agctgtaaca tctttttctg ccaataacag aagtttggca tgccgtgaag 1920
gtgtttgga atattattgg ataagaatag ctcaattatc ccaataaat ggatgaagct 1980
ataatagttt tggggaaaag attctcaa atataaagtc ttagaacaaa agaattcttt 2040
gaaataaaaa tattatatat aaaagtaaaa aaaaaa 2076

<210> 164
<211> 476
<212> PRT
<213> Homo sapiens

<400> 164
Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met
1 5 10 15
Pro Gly Pro Cys Asp Gly Leu Phe Arg Ser Leu Tyr Arg Ser Val Ser
20 25 30
Met Pro Pro Lys Gly Asp Ser Gly Gln Pro Leu Phe Leu Thr Pro Tyr
35 40 45
Ile Glu Ala Gly Lys Ile Gln Lys Gly Arg Glu Leu Ser Leu Val Gly
50 55 60
Pro Phe Pro Gly Leu Asn Met Lys Ser Tyr Ala Gly Phe Leu Thr Val
65 70 75 80
Asn Lys Thr Tyr Asn Ser Asn Leu Phe Phe Trp Phe Phe Pro Ala Gln
85 90 95
Ile Gln Pro Glu Asp Ala Pro Val Val Leu Trp Leu Gln Gly Gly Pro
100 105 110
Gly Gly Ser Ser Met Phe Gly Leu Phe Val Glu His Gly Pro Tyr Val
115 120 125
Val Thr Ser Asn Met Thr Leu Arg Asp Arg Asp Phe Pro Trp Thr Thr
130 135 140
Thr Leu Ser Met Leu Tyr Ile Asp Asn Pro Val Gly Thr Gly Phe Ser
145 150 155 160
Phe Thr Asp Asp Thr His Gly Tyr Ala Val Asn Glu Asp Asp Val Ala
165 170 175
Arg Asp Leu Tyr Ser Ala Leu Ile Gln Phe Phe Gln Ile Phe Pro Glu
180 185 190
Tyr Lys Asn Asn Asp Phe Tyr Val Thr Gly Glu Ser Tyr Ala Gly Lys
195 200 205
Tyr Val Pro Ala Ile Ala His Leu Ile His Ser Leu Asn Pro Val Arg
210 215 220

Glu Val Lys Ile Asn Leu Asn Gly Ile Ala Ile Gly Asp Gly Tyr Ser		
225	230	235 240
Asp Pro Glu Ser Ile Ile Gly Gly Tyr Ala Glu Phe Leu Tyr Gln Ile		
	245	250 255
Gly Leu Leu Asp Glu Lys Gln Lys Lys Tyr Phe Gln Lys Gln Cys His		
	260	265 270
Glu Cys Ile Glu His Ile Arg Lys Gln Asn Trp Phe Glu Ala Phe Glu		
	275	280 285
Ile Leu Asp Lys Leu Leu Asp Gly Asp Leu Thr Ser Asp Pro Ser Tyr		
	290	295 300
Phe Gln Asn Val Thr Gly Cys Ser Asn Tyr Tyr Asn Phe Leu Arg Cys		
305	310	315 320
Thr Glu Pro Glu Asp Gln Leu Tyr Tyr Val Lys Phe Leu Ser Leu Pro		
	325	330 335
Glu Val Arg Gln Ala Ile His Val Gly Asn Gln Thr Phe Asn Asp Gly		
	340	345 350
Thr Ile Val Glu Lys Tyr Leu Arg Glu Asp Thr Val Gln Ser Val Lys		
	355	360 365
Pro Trp Leu Thr Glu Ile Met Asn Asn Tyr Lys Val Leu Ile Tyr Asn		
	370	375 380
Gly Gln Leu Asp Ile Ile Val Ala Ala Ala Leu Thr Glu Arg Ser Leu		
385	390	395 400
Met Gly Met Asp Trp Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu Lys		
	405	410 415
Lys Val Trp Lys Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr Ile		
	420	425 430
Arg Gln Ala Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly His		
	435	440 445
Ile Leu Pro Tyr Asp Gln Pro Leu Arg Ala Phe Asp Met Ile Asn Arg		
	450	455 460
Phe Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly		
465	470	475

<210> 165

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 165
ttccatgccca cctaagggag actc 24

<210> 166
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 166
tggatgaggt gtgcaatggc tggc 24

<210> 167
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 167
agctctcaga ggctgggtcat aggg 24

<210> 168
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 168
gtcggccctt tcccaggact gaacatgaag agttatgccg gcttcctcac 50

<210> 169
<211> 2477
<212> DNA
<213> Homo sapiens

<400> 169
cgagggtctt tccgggtccg gaatggcaca tgtgggaatc ccagtcttgt tggctacaac 60
atctttccct ttcttaacaa gttctaacag ctgttctaac agctagtgat caggggttct 120
tcttgctgga gaagaaaggg ctgagggcag agcagggcac tctcactcag ggtgaccagc 180
tccttgccctc tctgtggata acagagcatg agaaagtga gagatgcagc ggagtgaggt 240
gatggaagtc taaaatagga aggaattttg tgtgcaatat cagactctgg gacagttga 300
cctggagagc ctgggggagg gcctgcctaa caagctttca aaaaacagga gcgacttcca 360
ctgggctggg ataagacgtg ccggtaggat aggggaagact gggtttagtc ctaatatcaa 420
attgactggc tgggtgaact tcaacagcct ttaacctct ctgggagatg aaaacgatgg 480
cttaaggggc cagaaataga gatgctttgt aaaataaaat tttaaaaaaa gcaagtattt 540
tatagcataa aggctagaga ccaaaataga taacaggatt ccctgaacat tcctaagagg 600
gagaaagtat gttaaaaata gaaaaaccaa aatgcagaag gaggagactc acagagctaa 660

```

accaggatgg ggaccctggg tcaggccagc ctctttgctc ctcccggaaa ttatttttgg 720
tctgaccaact ctgccttggt ttttgacaaa tcatgtgagg gccaacccgg gaaggtggag 780
cagatgagca cacacaggag ccgtctcctc accgccgccc ctctcagcat ggaacagagg 840
cagccctggc cccgggccct ggaggtggac agccgctctg tggtcctgct ctcagtggtc 900
tgggtgctgc tggccccccc agcagccggc atgcctcagt tcagcacctt ccactctgag 960
aatcgtgact ggaccttcaa ccacttgacc gtccaccaag ggacgggggc cgtctatgtg 1020
ggggccatca accgggtcta taagctgaca ggcaacctga ccatccagggt ggctcataag 1080
acagggccag aagaggacaa caagtctcgt taccggcccc tcatcgtgca gccctgcagc 1140
gaagtgtcga ccctcaccaa caatgtcaac aagctgctca tcattgacta ctctgagaac 1200
cgctgtctgg cctgtgggag cctctaccag ggggtctgca agctgctgcg gctggatgac 1260
ctcttcatcc tgggtggagcc atcccacaag aaggagcact acctgtccag tgtcaacaag 1320
acgggcacca tgtacggggt gattgtgcgc tctgagggtg aggatggcaa gctcttcac 1380
ggcacggctg tggatgggaa gcaggattac ttcccagacc tgtccagccg gaagctgccc 1440
cgagaccctg agtcctcagc catgctcgac tatgagctac acagcgattt tgtctcctct 1500
ctcatcaaga tcccttcaga caccctggcc ctgggtctccc actttgacat cttctacatc 1560
tacggctttg ctagtggggg ctttgtctac tttctcactg tccagcccga gaccctgag 1620
ggtgtggcca tcaactccgc tggagacctc ttctacacct cacgcacgt gcggtctctg 1680
aaggatgacc ccaagttcca ctcatcagtg tccctgcctt tcggtgcac ccgggccggg 1740
gtggaatacc gcctcctgca ggctgcttac ctggccaagc ctggggactc actggcccag 1800
gccttcaata tcaccagcca ggacgatgta ctctttgcca tcttctccaa agggcagaag 1860
cagtatcacc accgcccga tgactctgcc ctgtgtgcct tccctatccg ggccatcaac 1920
ttgcagatca aggagcgct ccagtctgcg taccaggcg agggcaacct ggagctcaac 1980
tggctgctgg ggaaggacgt ccagtgcacg aaggcgctg tccccatcga tgataacttc 2040
tgtggactgg acatcaacca gcccctggga ggctcaactc cagtggaggg cctgaccctg 2100
tacaccacca gcagggaccg catgacctct gtggcctcct acgtttacaa cggtacagc 2160
gtggtttttg tggggactaa gagtggcaag ctgaaaaagg taagagtcta tgagttcaga 2220
tgctccaatg ccattcacct cctcagcaaa gagtccctct tggaaagtag ctattggtg 2280
agatttaact ataggcaact ttattttctt ggggaacaaa ggtgaaatgg ggaggtaga 2340
aggggttaat tttgtgactt agcttctagc tacttctccc agccatcagt cattgggtat 2400
gtaaggaatg caagcgtatt tcaatatttc ccaaacttta agaaaaaact ttaagaaggt 2460
acatctgcaa aagcaaa 2477

```

<210> 170

<211> 552

<212> PRT

<213> Homo sapiens

<400> 170

```

Met Gly Thr Leu Gly Gln Ala Ser Leu Phe Ala Pro Pro Gly Asn Tyr
  1             5             10             15

```

```

Phe Trp Ser Asp His Ser Ala Leu Cys Phe Ala Glu Ser Cys Glu Gly
      20             25             30

```

```

Gln Pro Gly Lys Val Glu Gln Met Ser Thr His Arg Ser Arg Leu Leu
      35             40             45

```

```

Thr Ala Ala Pro Leu Ser Met Glu Gln Arg Gln Pro Trp Pro Arg Ala
      50             55             60

```

```

Leu Glu Val Asp Ser Arg Ser Val Val Leu Leu Ser Val Val Trp Val
      65             70             75             80

```

```

Leu Leu Ala Pro Pro Ala Ala Gly Met Pro Gln Phe Ser Thr Phe His
      85             90             95

```

```

Ser Glu Asn Arg Asp Trp Thr Phe Asn His Leu Thr Val His Gln Gly

```

100					105					110					
Thr	Gly	Ala	Val	Tyr	Val	Gly	Ala	Ile	Asn	Arg	Val	Tyr	Lys	Leu	Thr
	115						120					125			
Gly	Asn	Leu	Thr	Ile	Gln	Val	Ala	His	Lys	Thr	Gly	Pro	Glu	Glu	Asp
	130					135					140				
Asn	Lys	Ser	Arg	Tyr	Pro	Pro	Leu	Ile	Val	Gln	Pro	Cys	Ser	Glu	Val
145					150					155					160
Leu	Thr	Leu	Thr	Asn	Asn	Val	Asn	Lys	Leu	Leu	Ile	Ile	Asp	Tyr	Ser
				165					170					175	
Glu	Asn	Arg	Leu	Leu	Ala	Cys	Gly	Ser	Leu	Tyr	Gln	Gly	Val	Cys	Lys
			180					185					190		
Leu	Leu	Arg	Leu	Asp	Asp	Leu	Phe	Ile	Leu	Val	Glu	Pro	Ser	His	Lys
	195						200					205			
Lys	Glu	His	Tyr	Leu	Ser	Ser	Val	Asn	Lys	Thr	Gly	Thr	Met	Tyr	Gly
	210					215					220				
Val	Ile	Val	Arg	Ser	Glu	Gly	Glu	Asp	Gly	Lys	Leu	Phe	Ile	Gly	Thr
225					230					235					240
Ala	Val	Asp	Gly	Lys	Gln	Asp	Tyr	Phe	Pro	Thr	Leu	Ser	Ser	Arg	Lys
				245					250					255	
Leu	Pro	Arg	Asp	Pro	Glu	Ser	Ser	Ala	Met	Leu	Asp	Tyr	Glu	Leu	His
			260					265					270		
Ser	Asp	Phe	Val	Ser	Ser	Leu	Ile	Lys	Ile	Pro	Ser	Asp	Thr	Leu	Ala
	275						280					285			
Leu	Val	Ser	His	Phe	Asp	Ile	Phe	Tyr	Ile	Tyr	Gly	Phe	Ala	Ser	Gly
	290					295					300				
Gly	Phe	Val	Tyr	Phe	Leu	Thr	Val	Gln	Pro	Glu	Thr	Pro	Glu	Gly	Val
305					310					315					320
Ala	Ile	Asn	Ser	Ala	Gly	Asp	Leu	Phe	Tyr	Thr	Ser	Arg	Ile	Val	Arg
				325					330					335	
Leu	Cys	Lys	Asp	Asp	Pro	Lys	Phe	His	Ser	Tyr	Val	Ser	Leu	Pro	Phe
			340					345					350		
Gly	Cys	Thr	Arg	Ala	Gly	Val	Glu	Tyr	Arg	Leu	Leu	Gln	Ala	Ala	Tyr
	355						360					365			
Leu	Ala	Lys	Pro	Gly	Asp	Ser	Leu	Ala	Gln	Ala	Phe	Asn	Ile	Thr	Ser
	370					375					380				
Gln	Asp	Asp	Val	Leu	Phe	Ala	Ile	Phe	Ser	Lys	Gly	Gln	Lys	Gln	Tyr
385					390					395					400
His	His	Pro	Pro	Asp	Asp	Ser	Ala	Leu	Cys	Ala	Phe	Pro	Ile	Arg	Ala

405					410					415					
Ile	Asn	Leu	Gln	Ile	Lys	Glu	Arg	Leu	Gln	Ser	Cys	Tyr	Gln	Gly	Glu
		420						425					430		
Gly	Asn	Leu	Glu	Leu	Asn	Trp	Leu	Leu	Gly	Lys	Asp	Val	Gln	Cys	Thr
		435					440					445			
Lys	Ala	Pro	Val	Pro	Ile	Asp	Asp	Asn	Phe	Cys	Gly	Leu	Asp	Ile	Asn
	450					455					460				
Gln	Pro	Leu	Gly	Gly	Ser	Thr	Pro	Val	Glu	Gly	Leu	Thr	Leu	Tyr	Thr
465						470					475				480
Thr	Ser	Arg	Asp	Arg	Met	Thr	Ser	Val	Ala	Ser	Tyr	Val	Tyr	Asn	Gly
				485					490					495	
Tyr	Ser	Val	Val	Phe	Val	Gly	Thr	Lys	Ser	Gly	Lys	Leu	Lys	Lys	Val
			500					505					510		
Arg	Val	Tyr	Glu	Phe	Arg	Cys	Ser	Asn	Ala	Ile	His	Leu	Leu	Ser	Lys
		515					520					525			
Glu	Ser	Leu	Leu	Glu	Gly	Ser	Tyr	Trp	Trp	Arg	Phe	Asn	Tyr	Arg	Gln
	530					535					540				
Leu	Tyr	Phe	Leu	Gly	Glu	Gln	Arg								
545						550									

<210> 171
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 171
 tggaataaccg cctcctgcag

20

<210> 172
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 172
 cttctgccct ttggagaaga tggc

24

<210> 173
 <211> 43
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 173

ggactcactg gcccaggcct tcaatatcac cagccaggac gat

43

<210> 174

<211> 3106

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (1683)..(1683)

<223> a, t, c or g

<400> 174

aggctcccgc	gcgcggtga	gtgcggactg	gagtgggaac	ccgggtcccc	gcgcttagag	60
aacacgcgat	gaccacgtgg	agcctccggc	ggaggccggc	ccgcacgctg	ggactcctgc	120
tgctggtcgt	cttgggcttc	ctggtgctec	gcaggctgga	ctggagcacc	ctggtccttc	180
tgcggtccg	ccatcgacag	ctggggctgc	aggccaagg	ctggaacttc	atgctggagg	240
attccacctt	ctggatcttc	gggggctcca	tccactattt	ccgtgtgccc	agggagtact	300
ggagggaccg	cctgctgaag	atgaaggcct	gtggcttgaa	caccctcacc	acctatgttc	360
cgtggaacct	gcatgagcca	gaaagaggca	aatttgactt	ctctgggaac	ctggacctgg	420
aggccttcgt	cctgatggcc	gcagagatcg	ggctgtgggt	gattctgcgt	ccaggccccct	480
acatctgcag	tgagatggac	ctcgggggct	tgcccagctg	gctactccaa	gaccctggca	540
tgaggctgag	gacaacttac	aagggttca	ccgaagcagt	ggacctttat	tttgaccacc	600
tgatgtccag	ggtggtgcc	ctccagtaca	agcgtggggg	acctatcatt	gccgtgcagg	660
tggagaatga	atatggttcc	tataataaag	accccgcata	catgccctac	gtcaagaagg	720
cactggagga	ccgtggcatt	gtggaactgc	tcttgacttc	agacaacaag	gatgggctga	780
gcaaggggat	tgtccaggga	gtcttgcca	ccatcaactt	gcagtcaaca	cacgagctgc	840
agctactgac	cacctttctc	ttcaacgtcc	aggggactca	gcccgaagatg	gtgatggagt	900
actggacggg	gtggtttgac	tcgtggggag	gccctcaca	tatcttggt	tcttctgagg	960
ttttgaaaac	cgtgtctgcc	attgtggacg	ccggctctc	catcaacctc	tacatgttcc	1020
acggaggcac	caactttggc	ttcatgaatg	gagccatgca	cttccatgac	tacaagtcag	1080
atgtcaccag	ctatgactat	gatgctgtgc	tgacagaagc	cggcgattac	acggccaagt	1140
acatgaagct	tcgagacttc	ttcggctcca	tctcaggcat	ccctctccct	cccccacctg	1200
accttcttcc	caagatgccg	tatgagccct	taacgccagt	cttgtacctg	tctctgtggg	1260
acgccctcaa	gtacctgggg	gagccaatca	agtctgaaaa	gcccataaac	atggagaacc	1320
tgccagtcaa	tgggggaaat	ggacagtcct	tcgggtacat	tctctatgag	accagcatca	1380
cctcgtctgg	cactctcagt	ggccacgtgc	atgatcgggg	gcaggtgttt	gtgaacacag	1440
tatccatagg	attcttggac	tacaagacaa	cgaagattgc	tgtccccctg	atccagggtt	1500
acaccgtgct	gaggatcttg	gtggagaatc	gtgggcgagt	caactatggg	gagaatattg	1560
atgaccagcg	caaaggctta	attggaaatc	tctatctgaa	tgattcacc	ctgaaaaact	1620
tcagaatcta	tagcctggat	atgaagaaga	gcttctttca	gaggttcggc	ctggacaaat	1680
gnggttccct	cccagaaaac	cccacattac	ctgctttctt	cttgggtagc	ttgtccatca	1740
gctccacgcc	ttgtgacacc	tttctgaagc	tggagggtcg	ggagaagggg	gttgatttca	1800
tcaatggcca	gaaccttgg	cgttactgga	acattggacc	ccagaagacg	ctttacctcc	1860
caggctccctg	gttgagcagc	ggaatcaacc	aggtcatcgt	ttttgaggag	acgatggcgg	1920
gccctgcatt	acagttcacg	gaaaccccc	acctgggcag	gaaccagtac	attaagtga	1980
cgggtggcacc	ccctcctgct	ggtgccagtg	ggagactgcc	gcctcctctt	gacctgaagc	2040
ctgggtggctg	ctgccccacc	cctcactgca	aaagcatctc	cttaagtagc	aacctcaggg	2100
actgggggct	acagtctgcc	cctgtctcag	ctcaaaaccc	taagcctgca	gggaaagggtg	2160
ggatggctct	gggcctggct	ttgttgatga	tggctttcct	acagccctgc	tcttgtgccg	2220

```

aggctgtcgg gctgtctcta ggggtgggagc agctaatacag atcgcccagc ctttggccct 2280
cagaaaaagt gctgaaacgt gcccttgac cggacgtcac agccctgcga gcatctgctg 2340
gactcaggcg tgctctttgc tggttcctgg gaggttggc cacatccctc atggcccat 2400
tttatccccg aaatcctggg tgtgtcacca gtgtagaggg tggggaaggg gtgtctcacc 2460
tgagctgact ttgttcttcc ttcacaacct tctgagcctt ctttgggatt ctggaaggaa 2520
ctcggcgtga gaaacatgtg acttcccctt tcccttccca ctcgctgctt cccacagggt 2580
gacaggctgg gctggagaaa cagaaatcct caccctgcgt cttcccaagt tagcagggtg 2640
ctctggtgtt cagtgaggag gacatgtgag tcctggcaga agccatggcc catgtctgca 2700
catccaggga ggaggacaga aggcccagct cacatgtgag tcctggcaga agccatggcc 2760
catgtctgca catccaggga ggaggacaga aggcccagct cacatgtgag tcctggcaga 2820
agccatggcc catgtctgca catccaggga ggaggacaga aggcccagct cacatgtgag 2880
tcctggcaga agccatggcc catgtctgca catccaggga ggaggacaga aggcccagct 2940
cagtggcccc cgctccccac cccccacgcc cgaacagcag ggcagagca gccctccttc 3000
gaagtgtgtc caagtccgca tttagcctt gttctggggc ccagcccaac acctggcttg 3060
ggctcactgt cctgagttgc agtaaagcta taacctgaa tcacaa 3106

```

<210> 175
 <211> 636
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (539)
 <223> Any amino acid,

<400> 175

Met	Thr	Thr	Trp	Ser	Leu	Arg	Arg	Arg	Pro	Ala	Arg	Thr	Leu	Gly	Leu
1				5					10					15	
Leu	Leu	Leu	Val	Val	Leu	Gly	Phe	Leu	Val	Leu	Arg	Arg	Leu	Asp	Trp
			20					25						30	
Ser	Thr	Leu	Val	Pro	Leu	Arg	Leu	Arg	His	Arg	Gln	Leu	Gly	Leu	Gln
			35					40					45		
Ala	Lys	Gly	Trp	Asn	Phe	Met	Leu	Glu	Asp	Ser	Thr	Phe	Trp	Ile	Phe
			50				55					60			
Gly	Gly	Ser	Ile	His	Tyr	Phe	Arg	Val	Pro	Arg	Glu	Tyr	Trp	Arg	Asp
			65			70				75					80
Arg	Leu	Leu	Lys	Met	Lys	Ala	Cys	Gly	Leu	Asn	Thr	Leu	Thr	Thr	Tyr
				85					90					95	
Val	Pro	Trp	Asn	Leu	His	Glu	Pro	Glu	Arg	Gly	Lys	Phe	Asp	Phe	Ser
			100					105					110		
Gly	Asn	Leu	Asp	Leu	Glu	Ala	Phe	Val	Leu	Met	Ala	Ala	Glu	Ile	Gly
			115				120					125			
Leu	Trp	Val	Ile	Leu	Arg	Pro	Gly	Pro	Tyr	Ile	Cys	Ser	Glu	Met	Asp
			130			135					140				
Leu	Gly	Gly	Leu	Pro	Ser	Trp	Leu	Leu	Gln	Asp	Pro	Gly	Met	Arg	Leu
145					150					155					160

Arg	Thr	Thr	Tyr	Lys	Gly	Phe	Thr	Glu	Ala	Val	Asp	Leu	Tyr	Phe	Asp	165	170	175
His	Leu	Met	Ser	Arg	Val	Val	Pro	Leu	Gln	Tyr	Lys	Arg	Gly	Gly	Pro	180	185	190
Ile	Ile	Ala	Val	Gln	Val	Glu	Asn	Glu	Tyr	Gly	Ser	Tyr	Asn	Lys	Asp	195	200	205
Pro	Ala	Tyr	Met	Pro	Tyr	Val	Lys	Lys	Ala	Leu	Glu	Asp	Arg	Gly	Ile	210	215	220
Val	Glu	Leu	Leu	Leu	Thr	Ser	Asp	Asn	Lys	Asp	Gly	Leu	Ser	Lys	Gly	225	230	235
Ile	Val	Gln	Gly	Val	Leu	Ala	Thr	Ile	Asn	Leu	Gln	Ser	Thr	His	Glu	245	250	255
Leu	Gln	Leu	Leu	Thr	Thr	Phe	Leu	Phe	Asn	Val	Gln	Gly	Thr	Gln	Pro	260	265	270
Lys	Met	Val	Met	Glu	Tyr	Trp	Thr	Gly	Trp	Phe	Asp	Ser	Trp	Gly	Gly	275	280	285
Pro	His	Asn	Ile	Leu	Asp	Ser	Ser	Glu	Val	Leu	Lys	Thr	Val	Ser	Ala	290	295	300
Ile	Val	Asp	Ala	Gly	Ser	Ser	Ile	Asn	Leu	Tyr	Met	Phe	His	Gly	Gly	305	310	315
Thr	Asn	Phe	Gly	Phe	Met	Asn	Gly	Ala	Met	His	Phe	His	Asp	Tyr	Lys	325	330	335
Ser	Asp	Val	Thr	Ser	Tyr	Asp	Tyr	Asp	Ala	Val	Leu	Thr	Glu	Ala	Gly	340	345	350
Asp	Tyr	Thr	Ala	Lys	Tyr	Met	Lys	Leu	Arg	Asp	Phe	Phe	Gly	Ser	Ile	355	360	365
Ser	Gly	Ile	Pro	Leu	Pro	Pro	Pro	Pro	Asp	Leu	Leu	Pro	Lys	Met	Pro	370	375	380
Tyr	Glu	Pro	Leu	Thr	Pro	Val	Leu	Tyr	Leu	Ser	Leu	Trp	Asp	Ala	Leu	385	390	395
Lys	Tyr	Leu	Gly	Glu	Pro	Ile	Lys	Ser	Glu	Lys	Pro	Ile	Asn	Met	Glu	405	410	415
Asn	Leu	Pro	Val	Asn	Gly	Gly	Asn	Gly	Gln	Ser	Phe	Gly	Tyr	Ile	Leu	420	425	430
Tyr	Glu	Thr	Ser	Ile	Thr	Ser	Ser	Gly	Ile	Leu	Ser	Gly	His	Val	His	435	440	445
Asp	Arg	Gly	Gln	Val	Phe	Val	Asn	Thr	Val	Ser	Ile	Gly	Phe	Leu	Asp	450	455	460

Tyr Lys Thr Thr Lys Ile Ala Val Pro Leu Ile Gln Gly Tyr Thr Val
465 470 475 480

Leu Arg Ile Leu Val Glu Asn Arg Gly Arg Val Asn Tyr Gly Glu Asn
485 490 495

Ile Asp Asp Gln Arg Lys Gly Leu Ile Gly Asn Leu Tyr Leu Asn Asp
500 505 510

Ser Pro Leu Lys Asn Phe Arg Ile Tyr Ser Leu Asp Met Lys Lys Ser
515 520 525

Phe Phe Gln Arg Phe Gly Leu Asp Lys Trp Xaa Ser Leu Pro Glu Thr
530 535 540

Pro Thr Leu Pro Ala Phe Phe Leu Gly Ser Leu Ser Ile Ser Ser Thr
545 550 555 560

Pro Cys Asp Thr Phe Leu Lys Leu Glu Gly Trp Glu Lys Gly Val Val
565 570 575

Phe Ile Asn Gly Gln Asn Leu Gly Arg Tyr Trp Asn Ile Gly Pro Gln
580 585 590

Lys Thr Leu Tyr Leu Pro Gly Pro Trp Leu Ser Ser Gly Ile Asn Gln
595 600 605

Val Ile Val Phe Glu Glu Thr Met Ala Gly Pro Ala Leu Gln Phe Thr
610 615 620

Glu Thr Pro His Leu Gly Arg Asn Gln Tyr Ile Lys
625 630 635

<210> 176
<211> 2505
<212> DNA
<213> Homo sapiens

<400> 176
ggggacgcgg agctgagagg ctccgggcta gctaggtgta ggggtggacg ggtcccagga 60
ccctggtgag ggttctctac ttggccttcg gtgggggtca agacgcaggc acctacgcca 120
aaggggagca aagccgggct cggcccaggg ccccaggac ctccatctcc caatgttgga 180
ggaatccgac acgtgacggg ctgtccgccc tctcagacta gaggagcgct gtaaacgcca 240
tggctcccaa gaagctgtcc tgccttcggt ccctgctgct gccgctcagc ctgacgctac 300
tgctgcccc aagcagacact cggtcgttcg tagtgatag gggtcacgac cggtttctcc 360
tagacggggc ccggttccgc tatgtgtctg gcagcctgca ctactttcgg gtaccgcggg 420
tgctttgggc cgaccggcct ttgaagatgc gatggagcgg cctcaacgcc atacagtttt 480
atgtgccctg gaactaccac gagccacagc ctgggggtcta taactttaat ggcagccggg 540
acctcattgc ctttctgaat gaggcagctc tagcgaacct gttggtcata ctgagaccag 600
gaccttacat ctgtgcagag tgggagatgg ggggtctccc atcctggttg cttcgaatac 660
ctgaaattca tctaagaacc tcagatccag acttccttgc cgagtggtac tcctggttca 720
aggtcttgct gcccaagata tatccatggc tttatcacia tgggggcaac atcattagca 780
ttcaggtgga gaatgaatat ggtagctaca gagcctgtga cttcagctac atgaggcact 840
tggctgggct cttccgtgca ctgctaggag aaaagatctt gctcttcacc acagatgggc 900
ctgaaggact caagtgtggc tccctccggg gactctatac cactgtagat tttggcccag 960
ctgacaacat gaccaaaatc tttaccctgc ttcggaagta tgaaccccat gggccattgg 1020
taaactctga gtactacaca ggctggctgg attactgggg ccagaatcac tccacacggt 1080

```

ctgtgtcagc tgtaacacaaa ggactagaga acatgctcaa gttgggagcc agtgtgaaca 1140
tgtacatggt ccatggagggt accaactttg gatattggaa tgggtgccgat aagaagggac 1200
gcttccttcc gattactacc agctatgact atgatgcacc tatactctgaa gcaggggacc 1260
ccacaccta gctttttgct cttcgagatg tcatcagcaa gttccaggaa gttccttttg 1320
gacctttacc tcccccgagc cccaagatga tgcctggacc tgtgactctg cacctggttg 1380
ggcatttact ggctttccta gacttgcttt gccccgtgg gcccatcatt tcaatcttgc 1440
caatgacctt tgaggctgtc aagcaggacc atggcttcat gttgtaccga acctatatga 1500
cccataccat ttttgagcca acaccattct gggtgccaaa taatggagtc catgaccgtg 1560
cctatgtgat ggtggatggg gtgttcagg gtgttgtgga gcgaaatatg agagacaaac 1620
tatttttgac ggggaaactg ggggccaaaac tggatatctt ggtggagaac atggggaggc 1680
tcagcttttg gtctaacagc agtgacttca agggcctgtt gaagccacca attctggggc 1740
aaacaatcct taccagtggt atgatgttcc ctctgaaaat tgataacctt gtgaagtgg 1800
ggtttccctt ccagttgcca aaatggccat atcctcaagc tccttctggc cccacattct 1860
actccaaaac atttccaatt ttaggctcag ttggggacac atttctatat ctacctggat 1920
ggaccaaggg ccaagtctgg atcaatgggt ttaacttggg ccggtactgg acaaagcagg 1980
ggccacaaca gacctctac gtgccaagat tcctgctgtt tcctagggga gccctcaaca 2040
aaattacatt gctggaacta gaagatgtac ctctccagcc ccaagtccaa tttttggata 2100
agcctatcct caatagcact agtactttgc acaggacaca tatcaattcc ctttcagctg 2160
atacactgag tgctctgaa ccaatggagt taagtgggca ctgaaaggta ggccgggcat 2220
ggtggctcat gctgtaatc ccagcacttt gggaggctga gacgggtgga ttacctgagg 2280
tcaggacttc aagaccagcc tggccaacat ggtgaaaccc cgtctccact aaaaatacaa 2340
aaattagccg ggcgtgatgg tgggcacctc taatcccagc tacttgggag gctgagggca 2400
ggagaattgc ttgaatccag gaggcagagg ttgcagttag tggaggttgt accactgcac 2460
tccagcctgg ctgacagtga gacactccat ctcaaaaaaa aaaaaa 2505

```

<210> 177
 <211> 654
 <212> PRT
 <213> Homo sapiens

<400> 177

Met	Ala	Pro	Lys	Lys	Leu	Ser	Cys	Leu	Arg	Ser	Leu	Leu	Leu	Pro	Leu
1				5					10					15	
Ser	Leu	Thr	Leu	Leu	Leu	Pro	Gln	Ala	Asp	Thr	Arg	Ser	Phe	Val	Val
			20					25					30		
Asp	Arg	Gly	His	Asp	Arg	Phe	Leu	Leu	Asp	Gly	Ala	Pro	Phe	Arg	Tyr
		35					40					45			
Val	Ser	Gly	Ser	Leu	His	Tyr	Phe	Arg	Val	Pro	Arg	Val	Leu	Trp	Ala
	50					55					60				
Asp	Arg	Leu	Leu	Lys	Met	Arg	Trp	Ser	Gly	Leu	Asn	Ala	Ile	Gln	Phe
65					70					75				80	
Tyr	Val	Pro	Trp	Asn	Tyr	His	Glu	Pro	Gln	Pro	Gly	Val	Tyr	Asn	Phe
				85					90					95	
Asn	Gly	Ser	Arg	Asp	Leu	Ile	Ala	Phe	Leu	Asn	Glu	Ala	Ala	Leu	Ala
			100				105						110		
Asn	Leu	Leu	Val	Ile	Leu	Arg	Pro	Gly	Pro	Tyr	Ile	Cys	Ala	Glu	Trp
		115					120					125			
Glu	Met	Gly	Gly	Leu	Pro	Ser	Trp	Leu	Leu	Arg	Lys	Pro	Glu	Ile	His
	130					135					140				

Leu Arg Thr Ser Asp Pro Asp Phe Leu Ala Ala Val Asp Ser Trp Phe
 145 150 155 160
 Lys Val Leu Leu Pro Lys Ile Tyr Pro Trp Leu Tyr His Asn Gly Gly
 165 170 175
 Asn Ile Ile Ser Ile Gln Val Glu Asn Glu Tyr Gly Ser Tyr Arg Ala
 180 185 190
 Cys Asp Phe Ser Tyr Met Arg His Leu Ala Gly Leu Phe Arg Ala Leu
 195 200 205
 Leu Gly Glu Lys Ile Leu Leu Phe Thr Thr Asp Gly Pro Glu Gly Leu
 210 215 220
 Lys Cys Gly Ser Leu Arg Gly Leu Tyr Thr Thr Val Asp Phe Gly Pro
 225 230 235 240
 Ala Asp Asn Met Thr Lys Ile Phe Thr Leu Leu Arg Lys Tyr Glu Pro
 245 250 255
 His Gly Pro Leu Val Asn Ser Glu Tyr Tyr Thr Gly Trp Leu Asp Tyr
 260 265 270
 Trp Gly Gln Asn His Ser Thr Arg Ser Val Ser Ala Val Thr Lys Gly
 275 280 285
 Leu Glu Asn Met Leu Lys Leu Gly Ala Ser Val Asn Met Tyr Met Phe
 290 295 300
 His Gly Gly Thr Asn Phe Gly Tyr Trp Asn Gly Ala Asp Lys Lys Gly
 305 310 315 320
 Arg Phe Leu Pro Ile Thr Thr Ser Tyr Asp Tyr Asp Ala Pro Ile Ser
 325 330 335
 Glu Ala Gly Asp Pro Thr Pro Lys Leu Phe Ala Leu Arg Asp Val Ile
 340 345 350
 Ser Lys Phe Gln Glu Val Pro Leu Gly Pro Leu Pro Pro Pro Ser Pro
 355 360 365
 Lys Met Met Leu Gly Pro Val Thr Leu His Leu Val Gly His Leu Leu
 370 375 380
 Ala Phe Leu Asp Leu Leu Cys Pro Arg Gly Pro Ile His Ser Ile Leu
 385 390 395 400
 Pro Met Thr Phe Glu Ala Val Lys Gln Asp His Gly Phe Met Leu Tyr
 405 410 415
 Arg Thr Tyr Met Thr His Thr Ile Phe Glu Pro Thr Pro Phe Trp Val
 420 425 430
 Pro Asn Asn Gly Val His Asp Arg Ala Tyr Val Met Val Asp Gly Val
 435 440 445

Phe Gln Gly Val Val Glu Arg Asn Met Arg Asp Lys Leu Phe Leu Thr
 450 455 460
 Gly Lys Leu Gly Ser Lys Leu Asp Ile Leu Val Glu Asn Met Gly Arg
 465 470 475 480
 Leu Ser Phe Gly Ser Asn Ser Ser Asp Phe Lys Gly Leu Leu Lys Pro
 485 490 495
 Pro Ile Leu Gly Gln Thr Ile Leu Thr Gln Trp Met Met Phe Pro Leu
 500 505 510
 Lys Ile Asp Asn Leu Val Lys Trp Trp Phe Pro Leu Gln Leu Pro Lys
 515 520 525
 Trp Pro Tyr Pro Gln Ala Pro Ser Gly Pro Thr Phe Tyr Ser Lys Thr
 530 535 540
 Phe Pro Ile Leu Gly Ser Val Gly Asp Thr Phe Leu Tyr Leu Pro Gly
 545 550 555 560
 Trp Thr Lys Gly Gln Val Trp Ile Asn Gly Phe Asn Leu Gly Arg Tyr
 565 570 575
 Trp Thr Lys Gln Gly Pro Gln Gln Thr Leu Tyr Val Pro Arg Phe Leu
 580 585 590
 Leu Phe Pro Arg Gly Ala Leu Asn Lys Ile Thr Leu Leu Glu Leu Glu
 595 600 605
 Asp Val Pro Leu Gln Pro Gln Val Gln Phe Leu Asp Lys Pro Ile Leu
 610 615 620
 Asn Ser Thr Ser Thr Leu His Arg Thr His Ile Asn Ser Leu Ser Ala
 625 630 635 640
 Asp Thr Leu Ser Ala Ser Glu Pro Met Glu Leu Ser Gly His
 645 650

<210> 178

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 178

tggtactcc aagaccctgg catg

24

<210> 179

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 179
 tggacaaatc cccttgctca gccc 24

<210> 180
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 180
 gggcttcacc gaagcagtgg acctttattt tgaccacctg atgtccaggg 50

<210> 181
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 181
 ccagctatga ctatgatgca cc 22

<210> 182
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 182
 tggcaccag aatggtgttg gctc 24

<210> 183
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 183
 cgagatgtca tcagcaagtt ccaggaagtt cctttgggac ctttacctcc 50

<210> 184
 <211> 1947

<212> DNA
<213> Homo sapiens

<400> 184

```
gctttgaaca cgtctgcaag cccaaagttg agcatctgat tggttatgag gtatttgagt 60
gcaccacaaa tatggcttac atgttgaaaa agcttctcat cagttacata tccattatTT 120
gtgtttatgg ctttatctgc ctctacactc tcttctgggt attcaggata cctttgaagg 180
aatattcttt cgaaaaagtc agagaagaga gcagttttag tgacattcca gatgtcaaaa 240
acgattttgc gttccttctt cacatggtag accagtatga ccagctatat tccaagcggt 300
ttggtgtgtt cttgtcagaa gttagtgaat ataaacttag ggaaattagt ttgaaccatg 360
agtggacatt tgaaaaactc aggcagcaca ttccacgcaa cgcccaggac aagcaggagt 420
tgcattctgt catgctgtcg ggggtgcccg atgctgtctt tgacctcaca gacctggatg 480
tgctaaagct tgaactaatt ccagaagcta aaattcctgc taagatttct caaatgacta 540
acctccaaga gctccacctc tgccactgcc ctgcaaaagt tgaacagact gcttttagct 600
ttcttcgcga tcacttgaga tgccttcacg tgaagttcac tgatgtggct gaaattcctg 660
cctgggtgta tttgctcaaa aaccttcgag agttgtactt aataggcaat ttgaactctg 720
aaaacaataa gatgatagga cttgaatctc tccgagagtt gcggcacctt aagattctcc 780
acgtgaagag caatttgacc aaagttccct ccaacattac agatgtggct ccacatctta 840
caaagttagt cattcataat gacggcacta aactcttggt actgaacagc ctttaagaaa 900
tgatgaatgt cgctgagctg gaactccaga actgtgagct agagagaatc ccacatgcta 960
ttttcagcct ctctaattta caggaactgg atttaaagtc caataacatt cgcacaattg 1020
aggaaatcat cagtttccag catTTaaaac gactgacttg tttaaaatta tggcataaca 1080
aaattgttac tattcctccc tctattacc atgtcaaaaa cttggagtca ctttatttct 1140
ctaacaacaa gctcgaatcc ttaccagtgg cagtatttag tttacagaaa ctcatagct 1200
tagatgtgag ctacaacaac atttcaatga ttccaataga aataggattg cttcagaacc 1260
tgcagcattt gcatatcact gggaacaaag tggacattct gccaaaacaa ttgtttaaat 1320
gcataaagtt gaggactttg aatctgggac agaactgcat cacctcactc ccagagaaag 1380
ttggtcagct ctcccagctc actcagctgg agctgaagg gaactgcttg gaccgcctgc 1440
cagcccagct gggccagtg cggatgctca agaaaagcgg gcttggtgtg gaagatcacc 1500
tttttgatac cctgccactc gaagtcaaag aggcattgaa tcaagacata aatattccct 1560
ttgcaaagtg gatttaaaact aagataatat atgcacagt atgtgcagga acaacttct 1620
agattgcaag tgctcacgta caagttatta caagataatg catttttaga gtagatacat 1680
cttttaaaat aaaacagaga ggatgcatag aaggctgata gaagacataa ctgaatgttc 1740
aatgtttgta ggggttttaag tcattcattt ccaaatcatt ttttttttct ttttggggaa 1800
agggaaggaa aaattataat cactaatctt ggttctttt aaattgtttg taacttggat 1860
gctgccgcta ctgaatgttt acaaattgct tgctgcttaa agtaaattgat taaattgaca 1920
ttttcttact aaaaaaaaaa aaaaaaa 1947
```

<210> 185
<211> 501
<212> PRT
<213> Homo sapiens

<400> 185

```
Met Ala Tyr Met Leu Lys Lys Leu Leu Ile Ser Tyr Ile Ser Ile Ile
  1              5              10              15

Cys Val Tyr Gly Phe Ile Cys Leu Tyr Thr Leu Phe Trp Leu Phe Arg
      20              25              30

Ile Pro Leu Lys Glu Tyr Ser Phe Glu Lys Val Arg Glu Glu Ser Ser
      35              40              45

Phe Ser Asp Ile Pro Asp Val Lys Asn Asp Phe Ala Phe Leu Leu His
      50              55              60

Met Val Asp Gln Tyr Asp Gln Leu Tyr Ser Lys Arg Phe Gly Val Phe
```

65		70		75		80
Leu Ser Glu Val	Ser Glu Asn Lys	Leu Arg Glu Ile	Ser Leu Asn His			
	85	90	95			
Glu Trp Thr Phe	Glu Lys Leu Arg	Gln His Ile Ser	Arg Asn Ala Gln			
	100	105	110			
Asp Lys Gln Glu	Leu His Leu Phe	Met Leu Ser Gly	Val Pro Asp Ala			
	115	120	125			
Val Phe Asp Leu	Thr Asp Leu Asp	Val Leu Lys Leu	Glu Leu Ile Pro			
	130	135	140			
Glu Ala Lys Ile	Pro Ala Lys Ile	Ser Gln Met Thr	Asn Leu Gln Glu			
	145	150	155			160
Leu His Leu Cys	His Cys Pro Ala	Lys Val Glu Gln	Thr Ala Phe Ser			
	165	170	175			
Phe Leu Arg Asp	His Leu Arg Cys	Leu His Val Lys	Phe Thr Asp Val			
	180	185	190			
Ala Glu Ile Pro	Ala Trp Val Tyr	Leu Leu Lys Asn	Leu Arg Glu Leu			
	195	200	205			
Tyr Leu Ile Gly	Asn Leu Asn Ser	Glu Asn Asn Lys	Met Ile Gly Leu			
	210	215	220			
Glu Ser Leu Arg	Glu Leu Arg His	Leu Lys Ile Leu	His Val Lys Ser			
	225	230	235			240
Asn Leu Thr Lys	Val Pro Ser Asn	Ile Thr Asp Val	Ala Pro His Leu			
	245	250	255			
Thr Lys Leu Val	Ile His Asn Asp	Gly Thr Lys Leu	Leu Val Leu Asn			
	260	265	270			
Ser Leu Lys Lys	Met Met Asn Val	Ala Glu Leu Glu	Leu Gln Asn Cys			
	275	280	285			
Glu Leu Glu Arg	Ile Pro His Ala	Ile Phe Ser Leu	Ser Asn Leu Gln			
	290	295	300			
Glu Leu Asp Leu	Lys Ser Asn Asn	Ile Arg Thr Ile	Glu Glu Ile Ile			
	305	310	315			320
Ser Phe Gln His	Leu Lys Arg Leu	Thr Cys Leu Lys	Leu Trp His Asn			
	325	330	335			
Lys Ile Val Thr	Ile Pro Pro Ser	Ile Thr His Val	Lys Asn Leu Glu			
	340	345	350			
Ser Leu Tyr Phe	Ser Asn Asn Lys	Leu Glu Ser Leu	Pro Val Ala Val			
	355	360	365			
Phe Ser Leu Gln	Lys Leu Arg Cys	Leu Asp Val Ser	Tyr Asn Asn Ile			

370	375	380
Ser Met Ile Pro Ile Glu Ile Gly Leu Leu Gln Asn Leu Gln His Leu		
385	390	395 400
His Ile Thr Gly Asn Lys Val Asp Ile Leu Pro Lys Gln Leu Phe Lys		
	405	410 415
Cys Ile Lys Leu Arg Thr Leu Asn Leu Gly Gln Asn Cys Ile Thr Ser		
	420	425 430
Leu Pro Glu Lys Val Gly Gln Leu Ser Gln Leu Thr Gln Leu Glu Leu		
	435	440 445
Lys Gly Asn Cys Leu Asp Arg Leu Pro Ala Gln Leu Gly Gln Cys Arg		
450	455	460
Met Leu Lys Lys Ser Gly Leu Val Val Glu Asp His Leu Phe Asp Thr		
465	470	475 480
Leu Pro Leu Glu Val Lys Glu Ala Leu Asn Gln Asp Ile Asn Ile Pro		
	485	490 495
Phe Ala Asn Gly Ile		
	500	

<210> 186
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 186
 cctccctcta ttacccatgt c 21

<210> 187
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 187
 gaccaacttt ctctgggagt gagg 24

<210> 188
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

oligonucleotide probe

<400> 188

gtcacttttat ttctctaaca acaagctcga atccttacca gtggcag

47

<210> 189

<211> 2917

<212> DNA

<213> Homo sapiens

<400> 189

```

cccacgcgtc cggccttctc tctggacttt gcattttccat tccttttcat tgacaaactg 60
acttttttta tttctttttt tccatctctg ggccagcttg ggatcctagg ccgccctggg 120
aagacatttg tgttttacac acataaggat ctgtgttttg ggtttcttct tcctcccctg 180
acattggcat tgcttagtgg ttgtgtgggg agggagacca cgtgggctca gtgcttgctt 240
gcacttatct gcctaggtac atcgaagtct ttgacctcc atacagtgat tatgcctgtc 300
atcgctggtg gtatcctggc ggccttgctc ctgctgatag ttgtcgtgct ctgtctttac 360
ttcaaaatac acaacgcgtc aaaagctgca aaggaacctg aagctgtggc tgtaaaaaat 420
cacaaccag acaaggtgtg gtgggccaag aacagccagg ccaaaaccat tgccacggag 480
tcttgtcctg ccctgcagtg ctgtgaagga tatagaatgt gtgccagttt tgattccctg 540
ccaccttgct gttgcgacat aaatgagggc ctctgagtta ggaaaggctc ccttctcaaa 600
gcagagccct gaagacttca atgatgtcaa tgaggccacc tgtttgtgat gtgcaggcac 660
agaagaaagg cacagctccc catcagtttc atggaaaata actcagtgcc tgctgggaac 720
cagctgctgg agatccctac agagagcttc cactgggggc aacccttcca ggaaggagtt 780
ggggagagag aaccctcact gtggggaatg ctgataaacc agtcacacag ctgctctatt 840
ctcacacaaa tctacccttt gcgtggctgg aactgacgtt tccctggagg tgtccagaaa 900
gctgatgtaa cacagagcct ataaaagctg tcggtcctta aggctgcccc gcgccttgcc 960
aaaatggagc ttgtaagaag gctcatgcca ttgacctct taattctctc ctgtttggcg 1020
gagctgacaa tggcgagggc tgaaggcaat gcaagctgca cagtcagtct agggggtgcc 1080
aatatggcag agaccacaa agccatgata ctgcaactca atcccagtga gaactgcacc 1140
tggaacaatag aaagaccaga aaacaaaagc atcagaatta tcttttctta tgtccagctt 1200
gatccagatg gaagctgtga aagtgaaaac attaaagtct ttgacggaac ctccagcaat 1260
gggcctctgc tagggcaagt ctgcagtaaa aacgactatg ttctgtatt tgaatcatca 1320
tccagtacat tgacgtttca aatagttact gactcagcaa gaattcaaa aactgtcttt 1380
gtcttctact acttcttctc tcctaacatc tctattccaa actgtggcgg ttacctggat 1440
accttggaag gatccttcac cagccccaat tacccaaagc cgcacacctga gctggcttat 1500
tgtgtgtggc acatacaagt ggagaaagat tacaagataa aactaaactt caaagagatt 1560
ttcctagaaa tagacaaaca gtgcaaattt gattttcttg ccatctatga tggcccctcc 1620
accaactctg gctgattgg acaagtctgt ggccgtgtga ctccacctt cgaatcgtca 1680
tcaaactctc tgactgtcgt gttgtctaca gattatgcca attcttaccg gggattttct 1740
gcttctctaca cctcaattta tgcagaaaac atcaacacta catctttaac ttgctcttct 1800
gacaggatga gagttattat aagcaaatcc tacctagagg cttttaactc taatgggaat 1860
aacttgcaac taaaagaccc aacttgca ccaaaattat caaatgttgt ggaattttct 1920
gtccctctta atggatgtgg tacaatcaga aaggtagaag atcagtcaat tacttacacc 1980
aatataatca ctttttctgc atcctcaact tctgaagtga tcaccctgca gaaacaactc 2040
cagattattg tgaagtgtga aatgggacat aattctacag tggagataat atacataaca 2100
gaagatgatg taatacaaa tcaaaatgca ctgggcaaat ataacaccag catggctctt 2160
tttgaatcca attcatttga aaagactata cttgaatcac catattatgt ggatttgaac 2220
caaactcttt ttgttcaagt tagtctgcac acctcagatc caaatttggg ggtgtttctt 2280
gatacctgta gagcctctcc cacctctgac ttgtcatctc caacctacga cctaatcaag 2340
agtggatgta gtcgagatga aacttgtaag gtgtatccct tatttggaca ctatgggaga 2400
ttccagttta atgcctttaa attcttgaga agtatgagct ctgtgtatct gcagtgtaaa 2460
gttttgatat gtgatagcag tgaccaccag tctcgtgca atcaagggtg tgtctccaga 2520
agcaaacgag acatttcttc atataaatgg aaaacagatt ccatcatagg acccattcgt 2580
ctgaaaaggg atcgaagtgc aagtggcaat tcaggatttc agcatgaaac acatgcggaa 2640
gaaactccaa accagccttt caacagtgtg catctgtttt ccttcatggg tctagctctg 2700
aatgtggtga ctgtagcgac aatcacagtg aggcattttg taaatcaacg ggcagactac 2760

```

aaataccaga agctgcagaa ctattaacta acaggtccaa ccctaagtga gacatgtttc 2820
 tccaggatgc caaaggaaat gctacctcgt ggctacacat attatgaata aatgaggaag 2880
 ggctgaaag tgacacacag gcctgcatgt aaaaaaa 2917

<210> 190

<211> 607

<212> PRT

<213> Homo sapiens

<400> 190

Met Glu Leu Val Arg Arg Leu Met Pro Leu Thr Leu Leu Ile Leu Ser
 1 5 10 15

Cys Leu Ala Glu Leu Thr Met Ala Glu Ala Glu Gly Asn Ala Ser Cys
 20 25 30

Thr Val Ser Leu Gly Gly Ala Asn Met Ala Glu Thr His Lys Ala Met
 35 40 45

Ile Leu Gln Leu Asn Pro Ser Glu Asn Cys Thr Trp Thr Ile Glu Arg
 50 55 60

Pro Glu Asn Lys Ser Ile Arg Ile Ile Phe Ser Tyr Val Gln Leu Asp
 65 70 75 80

Pro Asp Gly Ser Cys Glu Ser Glu Asn Ile Lys Val Phe Asp Gly Thr
 85 90 95

Ser Ser Asn Gly Pro Leu Leu Gly Gln Val Cys Ser Lys Asn Asp Tyr
 100 105 110

Val Pro Val Phe Glu Ser Ser Ser Ser Thr Leu Thr Phe Gln Ile Val
 115 120 125

Thr Asp Ser Ala Arg Ile Gln Arg Thr Val Phe Val Phe Tyr Tyr Phe
 130 135 140

Phe Ser Pro Asn Ile Ser Ile Pro Asn Cys Gly Gly Tyr Leu Asp Thr
 145 150 155 160

Leu Glu Gly Ser Phe Thr Ser Pro Asn Tyr Pro Lys Pro His Pro Glu
 165 170 175

Leu Ala Tyr Cys Val Trp His Ile Gln Val Glu Lys Asp Tyr Lys Ile
 180 185 190

Lys Leu Asn Phe Lys Glu Ile Phe Leu Glu Ile Asp Lys Gln Cys Lys
 195 200 205

Phe Asp Phe Leu Ala Ile Tyr Asp Gly Pro Ser Thr Asn Ser Gly Leu
 210 215 220

Ile Gly Gln Val Cys Gly Arg Val Thr Pro Thr Phe Glu Ser Ser Ser
 225 230 235 240

Asn Ser Leu Thr Val Val Leu Ser Thr Asp Tyr Ala Asn Ser Tyr Arg
 245 250 255

Gly	Phe	Ser	Ala	Ser	Tyr	Thr	Ser	Ile	Tyr	Ala	Glu	Asn	Ile	Asn	Thr		
			260					265					270				
Thr	Ser	Leu	Thr	Cys	Ser	Ser	Asp	Arg	Met	Arg	Val	Ile	Ile	Ser	Lys		
		275					280					285					
Ser	Tyr	Leu	Glu	Ala	Phe	Asn	Ser	Asn	Gly	Asn	Asn	Leu	Gln	Leu	Lys		
	290					295					300						
Asp	Pro	Thr	Cys	Arg	Pro	Lys	Leu	Ser	Asn	Val	Val	Glu	Phe	Ser	Val		
305					310					315					320		
Pro	Leu	Asn	Gly	Cys	Gly	Thr	Ile	Arg	Lys	Val	Glu	Asp	Gln	Ser	Ile		
			325						330					335			
Thr	Tyr	Thr	Asn	Ile	Ile	Thr	Phe	Ser	Ala	Ser	Ser	Thr	Ser	Glu	Val		
			340					345						350			
Ile	Thr	Arg	Gln	Lys	Gln	Leu	Gln	Ile	Ile	Val	Lys	Cys	Glu	Met	Gly		
		355					360					365					
His	Asn	Ser	Thr	Val	Glu	Ile	Ile	Tyr	Ile	Thr	Glu	Asp	Asp	Val	Ile		
	370					375					380						
Gln	Ser	Gln	Asn	Ala	Leu	Gly	Lys	Tyr	Asn	Thr	Ser	Met	Ala	Leu	Phe		
385					390					395					400		
Glu	Ser	Asn	Ser	Phe	Glu	Lys	Thr	Ile	Leu	Glu	Ser	Pro	Tyr	Tyr	Val		
				405					410					415			
Asp	Leu	Asn	Gln	Thr	Leu	Phe	Val	Gln	Val	Ser	Leu	His	Thr	Ser	Asp		
			420					425					430				
Pro	Asn	Leu	Val	Val	Phe	Leu	Asp	Thr	Cys	Arg	Ala	Ser	Pro	Thr	Ser		
		435					440						445				
Asp	Phe	Ala	Ser	Pro	Thr	Tyr	Asp	Leu	Ile	Lys	Ser	Gly	Cys	Ser	Arg		
	450					455					460						
Asp	Glu	Thr	Cys	Lys	Val	Tyr	Pro	Leu	Phe	Gly	His	Tyr	Gly	Arg	Phe		
465					470					475					480		
Gln	Phe	Asn	Ala	Phe	Lys	Phe	Leu	Arg	Ser	Met	Ser	Ser	Val	Tyr	Leu		
			485					490						495			
Gln	Cys	Lys	Val	Leu	Ile	Cys	Asp	Ser	Ser	Asp	His	Gln	Ser	Arg	Cys		
			500					505						510			
Asn	Gln	Gly	Cys	Val	Ser	Arg	Ser	Lys	Arg	Asp	Ile	Ser	Ser	Tyr	Lys		
		515					520					525					
Trp	Lys	Thr	Asp	Ser	Ile	Ile	Gly	Pro	Ile	Arg	Leu	Lys	Arg	Asp	Arg		
	530					535						540					
Ser	Ala	Ser	Gly	Asn	Ser	Gly	Phe	Gln	His	Glu	Thr	His	Ala	Glu	Glu		
545					550					555					560		

Thr Pro Asn Gln Pro Phe Asn Ser Val His Leu Phe Ser Phe Met Val
565 570 575

Leu Ala Leu Asn Val Val Thr Val Ala Thr Ile Thr Val Arg His Phe
580 585 590

Val Asn Gln Arg Ala Asp Tyr Lys Tyr Gln Lys Leu Gln Asn Tyr
595 600 605

<210> 191
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 191
tctctattcc aaactgtggc g 21

<210> 192
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 192
tttgatgacg attcgaaggt gg 22

<210> 193
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 193
ggaaggatcc ttcaccagcc ccaattaccc aaagccgcat cctgagc 47

<210> 194
<211> 2362
<212> DNA
<213> Homo sapiens

<400> 194
gacggaagaa cagcgctccc gaggccgagg gagcctgcag agaggacagc cggcctgcgc 60
cgggacatgc ggccccagga gctccccagg ctgcggttcc cggtgctgct gttgctgttg 120
ctgctgctgc cgccgcccgc gtgccctgcc cacagcgcca cgcgcttcga cccacctgg 180
gagtcacctg acgcccgcga gctgcccgcg tggtttgacc aggccaaagt cggcattctc 240
atccactggg gagtgttttc cgtgcccagg ttccgtagcg agtggttctg gtggtattgg 300


```

caaaaggaaa agataccgaa gtatgtggaa tttatgaaag ataattaccc tcctagtttc 360
aaatatgaag attttggacc actatttaca gcaaaatfff ttaatgcaa ccagtggga 420
gatatttttc aggcctctgg tgccaaatac attgtcttaa cttccaaaca tcatgaaggc 480
tttaccttgt gggggtcaga atattcgtgg aactggaatg ccatagatga ggggcccaag 540
agggacattg tcaaggaact tgaggtagcc attaggaaca gaactgacct gcgttttggg 600
ctgtactatt ccctttttga atgggttcat ccgctcttcc ttgaggatga atccagttca 660
ttccataagc ggcaatftcc agttttctaag acattgccag agctctatga gttagtgaac 720
aactatcagc ctgaggttct gtggtcggat ggtgacggag gagcaccgga tcaatactgg 780
aacagcacag gcttcttggc ctggttatat aatgaaagcc cagttcgggg cacagtagtc 840
accaatgatc gttggggagc tggtagcatc tgtaagcatg gtggcttcta tacctgcagt 900
gatcgttata acccaggaca tcttttgcca cataaatggg aaaactgcat gacaatagac 960
aaactgtcct ggggctatag gagggaaagt ggaatctctg actatcttac aattgaagaa 1020
ttggtgaagc aacttgtaga gacagtttca tgtggaggaa atcttttgat gaatattggg 1080
cccacactag atggcaccat ttctgtagtt tttgaggagc gactgaggca agtggggtcc 1140
tggctaaaag tcaatggaga agctatftat gaaacctata cctggcgatc ccagaatgac 1200
actgtcacc cagatgtgtg gtacacatcc aagcctaaag aaaaattagt ctatgccatt 1260
tttcttaa at ggccacatc aggacagctg ttcttggcc atcccaaagc tattctgggg 1320
gcaacagagg tgaaactact gggccatgga cagccactta actggatttc tttggagcaa 1380
aatggcatta tggtagaact gccacagcta accattcatc agatgccgtg taaatggggc 1440
tgggctctag ccctaactaa tgtgatctaa agtgcagcag agtggctgat gctgcaagtt 1500
atgtctaagg ctaggaacta tcaggtgtct ataattgtag cacatggaga aagcaatgta 1560
aactggataa gaaaattatt tggcagttca gccctttccc tttttccac taaatftttc 1620
ttaaattacc catgtaacca ttftaactct ccagtgcact ttgccattaa agtctcttca 1680
cattgatttg tttccatgtg tgactcagag gtgagaattt tttcacatta tagtagcaag 1740
gaattgggtg tattatggac cgaactgaaa atfttatgtt gaagccatat ccccatgat 1800
tatatagtta tgcacactt aatatgggga atftttctgg gaaatgcatt gctagtcaat 1860
ttttttttgt gccaacatca tagagtgtat ttacaaaatc ctatagtgca tagcctacta 1920
cacaccta at gtgtatggta tagactgttg ctctaggct acagacatat acagcatgtt 1980
actgaatact gtaggcaata gtaacagtgg tatftgtata tcgaaacata tggaaacata 2040
gagaaggtac agtaaaaata ctgtaaaaata aatgggtgcac ctgtataggg cacttaccac 2100
gaatggagct tacaggactg gaagttgctc tgggtgagtc agtgagtga tgtgaaggcc 2160
taggacatta ttgaacactg ccagacgtta taaatactgt atgcttaggc tacactacat 2220
ttataaaaaa aagtttttct ttcttcaatt ataaattaac ataagtgtac tgtaacttta 2280
caaacgtttt aattttttaa accttttttg ctcttttgta ataacactta gcttaaaaca 2340
taaactcatt gtgcaaatgt aa
2362

```

<210> 195

<211> 467

<212> PRT

<213> Homo sapiens

<400> 195

```

Met Arg Pro Gln Glu Leu Pro Arg Leu Ala Phe Pro Leu Leu Leu Leu
  1              5              10              15

Leu Leu Leu Leu Leu Pro Pro Pro Pro Cys Pro Ala His Ser Ala Thr
  20              25              30

Arg Phe Asp Pro Thr Trp Glu Ser Leu Asp Ala Arg Gln Leu Pro Ala
  35              40              45

Trp Phe Asp Gln Ala Lys Phe Gly Ile Phe Ile His Trp Gly Val Phe
  50              55              60

Ser Val Pro Ser Phe Gly Ser Glu Trp Phe Trp Trp Tyr Trp Gln Lys
  65              70              75              80

```

Glu Lys Ile Pro Lys Tyr Val Glu Phe Met Lys Asp Asn Tyr Pro Pro
 85 90 95
 Ser Phe Lys Tyr Glu Asp Phe Gly Pro Leu Phe Thr Ala Lys Phe Phe
 100 105 110
 Asn Ala Asn Gln Trp Ala Asp Ile Phe Gln Ala Ser Gly Ala Lys Tyr
 115 120 125
 Ile Val Leu Thr Ser Lys His His Glu Gly Phe Thr Leu Trp Gly Ser
 130 135 140
 Glu Tyr Ser Trp Asn Trp Asn Ala Ile Asp Glu Gly Pro Lys Arg Asp
 145 150 155 160
 Ile Val Lys Glu Leu Glu Val Ala Ile Arg Asn Arg Thr Asp Leu Arg
 165 170 175
 Phe Gly Leu Tyr Tyr Ser Leu Phe Glu Trp Phe His Pro Leu Phe Leu
 180 185 190
 Glu Asp Glu Ser Ser Ser Phe His Lys Arg Gln Phe Pro Val Ser Lys
 195 200 205
 Thr Leu Pro Glu Leu Tyr Glu Leu Val Asn Asn Tyr Gln Pro Glu Val
 210 215 220
 Leu Trp Ser Asp Gly Asp Gly Gly Ala Pro Asp Gln Tyr Trp Asn Ser
 225 230 235 240
 Thr Gly Phe Leu Ala Trp Leu Tyr Asn Glu Ser Pro Val Arg Gly Thr
 245 250 255
 Val Val Thr Asn Asp Arg Trp Gly Ala Gly Ser Ile Cys Lys His Gly
 260 265 270
 Gly Phe Tyr Thr Cys Ser Asp Arg Tyr Asn Pro Gly His Leu Leu Pro
 275 280 285
 His Lys Trp Glu Asn Cys Met Thr Ile Asp Lys Leu Ser Trp Gly Tyr
 290 295 300
 Arg Arg Glu Ala Gly Ile Ser Asp Tyr Leu Thr Ile Glu Glu Leu Val
 305 310 315 320
 Lys Gln Leu Val Glu Thr Val Ser Cys Gly Gly Asn Leu Leu Met Asn
 325 330 335
 Ile Gly Pro Thr Leu Asp Gly Thr Ile Ser Val Val Phe Glu Glu Arg
 340 345 350
 Leu Arg Gln Val Gly Ser Trp Leu Lys Val Asn Gly Glu Ala Ile Tyr
 355 360 365
 Glu Thr Tyr Thr Trp Arg Ser Gln Asn Asp Thr Val Thr Pro Asp Val
 370 375 380

Trp Tyr Thr Ser Lys Pro Lys Glu Lys Leu Val Tyr Ala Ile Phe Leu
 385 390 395 400

Lys Trp Pro Thr Ser Gly Gln Leu Phe Leu Gly His Pro Lys Ala Ile
 405 410 415

Leu Gly Ala Thr Glu Val Lys Leu Leu Gly His Gly Gln Pro Leu Asn
 420 425 430

Trp Ile Ser Leu Glu Gln Asn Gly Ile Met Val Glu Leu Pro Gln Leu
 435 440 445

Thr Ile His Gln Met Pro Cys Lys Trp Gly Trp Ala Leu Ala Leu Thr
 450 455 460

Asn Val Ile
 465

<210> 196
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 196
 tggtttgacc aggccaagtt cgg 23

<210> 197
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 197
 ggattcatcc tcaaggaaga gcgg 24

<210> 198
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 198
 aactgcagc atcagccact ctgc 24

<210> 199
 <211> 45
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 199

ttccgtgccc agcttcggta gcgagtgggt ctggtggtat tggca

45

<210> 200

<211> 2372

<212> DNA

<213> Homo sapiens

<400> 200

```
agcagggaaa tccggatgtc tccggttatga agtggagcag tgagtgtgag cctcaacata 60
gttccagaac tctccatccg gactagttat tgagcatctg cctctcatat caccagtggc 120
catctgaggt gtttccctgg ctctgaaggg gtaggcacga tggccagggt cttcagcctg 180
gtgttgcttc tcacttccat ctggaccacg aggtcctctg tccaaggctc tttgogtgca 240
gaagagcttt ccatccaggt gtcattgcaga attatgggga tcacccttgt gagcaaaaag 300
gcgaaccagc agctgaattt cacagaagct aaggaggcct gtaggctgct gggactaagt 360
ttggccggca aggaccaagt tgaaacagcc ttgaaagcta gctttgaaac ttgcagctat 420
ggctgggttg gagatggatt cgtggtcatt tctaggatta gcccaaacc caagtgtggg 480
aaaaatgggg tgggtgtcct gatttggaag gttccagtga gccgacagtt tgcagcctat 540
tgttacaact catctgatac ttggactaac tcgtgcattc cagaaattat caccaccaa 600
gatcccatat tcaacactca aactgcaaca caaacaacag aatttattgt cagtgcagat 660
acctactcgg tggcatcccc ttactctaca atacctgcc ctactactac tcctcctgct 720
ccagcttcca cttctattcc acggagaaaa aaattgattt gtgtcacaga agtttttatg 780
gaaactagca ccatgtctac agaaactgaa ccatttggtg aaaataaagc agcattcaag 840
aatgaagctg ctgggttttg aggtgtcccc acggctctgc tagtgcttgc tctcctcttc 900
tttggtgctg cagctggtct tggattttgc tatgtcaaaa ggtagtgtaa ggcttccct 960
tttacaaca gaaactcaga gaaggaaatg atcgaaacca aagtagtaaa ggaggagaag 1020
gccaatgata gcaaccctaa tgaggaatca aagaaaactg ataaaaacc agaagagtc 1080
aagagtccaa gcaaaactac cgtgcgatgc ctggaagctg aagtttagat gagacagaaa 1140
tgaggagaca cacctgaggc tggtttcttt catgctcctt accctgcccc agctggggaa 1200
atcaaaaggg ccaagaagc aaagaagaaa gtccaccctt ggttcctaac tggaatcagc 1260
tcaggactgc cattggacta tggagtgcac caaagagaat gcccttctcc ttattgtaac 1320
cctgtctgga tcctatcctc ctacctcaa agcttccac gcccttctta gcctggctat 1380
gtcctaataa tatccactg ggagaaagga gttttgcaa gtgcaaggac ctaaaacatc 1440
tcatcagtat ccagtggtaa aaaggcctcc tggctgtctg aggctagggt ggttgaaagc 1500
caaggagtca ctgagaccaa ggctttctct actgattccg cagctcagac cctttcttca 1560
gctctgaaag agaaacacgt atcccacctg acatgtcctt ctgagcccg taagagcaaa 1620
agaatggcag aaaagttag cccctgaaag ccatggagat tctcataact tgagacctaa 1680
tctctgtaaa gctaaaataa agaaatagaa caaggctgag gatacgacag tacactgtca 1740
gcagggactg taaacacaga cagggtcaaa gtgttttctc tgaacacatt gagttggaat 1800
cactgtttag aacacacaca cttacttttt ctggtctcta ccactgctga tattttctct 1860
aggaaatata cttttacaag taacaaaaat aaaaactctt ataaatttct atttttatct 1920
gagttacaga aatgattact aaggaagatt actcagtaat ttgtttaaaa agtaataaaa 1980
ttcaacaaac atttgctgaa tagctactat atgtcaagtg ctgtgcaagg tattacactc 2040
tgtaattgaa tattattcct caaaaaattg cacatagtag aacgctatct gggaagctat 2100
ttttttcagt tttgatattt ctagcttatt tacttccaaa ctaattttta tttttgctga 2160
gactaatctt attcattttc tctaatatgg caaccattat aaccttaatt tattattaac 2220
atacctaaga agtacattgt tacctctata taccaaagca cattttaaaa gtgccattaa 2280
caaatgtatc actagccctc ctttttccaa caagaaggga ctgagagatg cagaaatatt 2340
tgtgacaaaa aattaaagca tttagaaaaac tt 2372
```

<210> 201

<211> 322
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic protein

<400> 201

Met	Ala	Arg	Cys	Phe	Ser	Leu	Val	Leu	Leu	Leu	Thr	Ser	Ile	Trp	Thr	
1				5				10						15		
Thr	Arg	Leu	Leu	Val	Gln	Gly	Ser	Leu	Arg	Ala	Glu	Glu	Leu	Ser	Ile	
		20						25					30			
Gln	Val	Ser	Cys	Arg	Ile	Met	Gly	Ile	Thr	Leu	Val	Ser	Lys	Lys	Ala	
		35					40					45				
Asn	Gln	Gln	Leu	Asn	Phe	Thr	Glu	Ala	Lys	Glu	Ala	Cys	Arg	Leu	Leu	
	50					55					60					
Gly	Leu	Ser	Leu	Ala	Gly	Lys	Asp	Gln	Val	Glu	Thr	Ala	Leu	Lys	Ala	
65					70					75					80	
Ser	Phe	Glu	Thr	Cys	Ser	Tyr	Gly	Trp	Val	Gly	Asp	Gly	Phe	Val	Val	
				85					90					95		
Ile	Ser	Arg	Ile	Ser	Pro	Asn	Pro	Lys	Cys	Gly	Lys	Asn	Gly	Val	Gly	
		100						105					110			
Val	Leu	Ile	Trp	Lys	Val	Pro	Val	Ser	Arg	Gln	Phe	Ala	Ala	Tyr	Cys	
	115						120					125				
Tyr	Asn	Ser	Ser	Asp	Thr	Trp	Thr	Asn	Ser	Cys	Ile	Pro	Glu	Ile	Ile	
	130					135					140					
Thr	Thr	Lys	Asp	Pro	Ile	Phe	Asn	Thr	Gln	Thr	Ala	Thr	Gln	Thr	Thr	
145					150					155					160	
Glu	Phe	Ile	Val	Ser	Asp	Ser	Thr	Tyr	Ser	Val	Ala	Ser	Pro	Tyr	Ser	
			165						170					175		
Thr	Ile	Pro	Ala	Pro	Thr	Thr	Thr	Pro	Pro	Ala	Pro	Ala	Ser	Thr	Ser	
		180						185					190			
Ile	Pro	Arg	Arg	Lys	Lys	Leu	Ile	Cys	Val	Thr	Glu	Val	Phe	Met	Glu	
	195					200						205				
Thr	Ser	Thr	Met	Ser	Thr	Glu	Thr	Glu	Pro	Phe	Val	Glu	Asn	Lys	Ala	
	210					215					220					
Ala	Phe	Lys	Asn	Glu	Ala	Ala	Gly	Phe	Gly	Gly	Val	Pro	Thr	Ala	Leu	
225					230					235					240	
Leu	Val	Leu	Ala	Leu	Leu	Phe	Phe	Gly	Ala	Ala	Ala	Gly	Leu	Gly	Phe	
			245					250						255		
Cys	Tyr	Val	Lys	Arg	Tyr	Val	Lys	Ala	Phe	Pro	Phe	Thr	Asn	Lys	Asn	

260	265	270
Gln Gln Lys Glu Met Ile Glu Thr Lys Val Val Lys Glu Glu Lys Ala		
275	280	285
Asn Asp Ser Asn Pro Asn Glu Glu Ser Lys Lys Thr Asp Lys Asn Pro		
290	295	300
Glu Glu Ser Lys Ser Pro Ser Lys Thr Thr Val Arg Cys Leu Glu Ala		
305	310	315 320
Glu Val		

<210> 202
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 202
 gagctttcca tccaggtgtc atgc 24

<210> 203
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 203
 gtcagtgaca gtacctactc gg 22

<210> 204
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 204
 tggagcagga ggagtagtag tagg 24

<210> 205
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

oligonucleotide probe

<400> 205
aggaggcctg taggctgctg ggactaagtt tggccggcaa ggaccaagtt 50

<210> 206
<211> 1620
<212> DNA
<213> Homo sapiens

<220>
<221> modified_base
<222> (973)..(973)
<223> a, t, c or g

<220>
<221> modified_base
<222> (977)..(977)
<223> a, t, c or g

<220>
<221> modified_base
<222> (996)..(996)
<223> a, t, c or g

<220>
<221> modified_base
<222> (1003)..(1003)
<223> a, t, c or g

<400> 206
agatggcggg cttggcacct ctaattgctc tcgtgtattc ggtgccgcga ctttcacgat 60
ggctcgccca accttactac cttctgtcgg cctgtctctc tgctgccttc ctactcgtga 120
ggaaactgcc gccgctctgc cacggtctgc ccaccaacg cgaagacggg aaccggtgtg 180
actttgactg gagagaagtg gagatcctga tgtttctcag tgccattgtg atgatgaaga 240
accgcagatc catcactgtg gagcaacata taggcaacat tttcatgttt agtaaagtgg 300
ccaacacaaat tcttttcttc cgcttgataa ttgcgatggg cctactttac atcacactct 360
gcatagtgtt cctgatgacg tgcaaacccc ccctatatat gggccctgag tatatcaagt 420
acttcaatga taaaaccatt gatgaggaac tagaacggga caagaggggc acttggattg 480
tggagttctt tgccaattgg tctaataact gccaatcatt tgcccctatc tatgctgacc 540
tctcccttaa atacaactgt acagggctaa attttgggaa ggtggatgtt ggacgctata 600
ctgatgttag tacgcggtac aaagtgagca catcacccct caccaagcaa ctccctaccc 660
tgatcctgtt ccaaggtggc aaggaggcaa tgccgcccgc acagattgac aagaaaggac 720
gggctgtctc atggaccttc tctgaggaga atgtgatccg agaatttaac ttaaagtggc 780
tataccagcg ggccaagaaa ctatcaaagg ctggagacaa tatccctgag gagcagcctg 840
tggtctcaac cccaccaca gtgtcagatg gggaaaacaa gaaggataaa taagatcctc 900
actttggcag tgcttctctc cctgtcaatt ccaggctctt tccataacca caagcctgag 960
gctgcagcct ttnattnatg ttttcccttt ggctgngact ggntggggca gcatgcagct 1020
tctgatttta aagaggcatc tagggaattg tcaggcaccg tacaggaagg cctgccatgc 1080
tgtggccaac tgtttcactg gagcaagaaa gagatctcat aggacggagg gggaaatggg 1140
ttccctccaa gcttgggtca gtgtgttaac tgcttatcag ctattcagac atctccatgg 1200
tttctccatg aaactctgtg gtttcatcat tccttcttag ttgacctgca cagcttgggt 1260
agacctagat ttaaccctaa ggtaagatgc tggggtatag aacgctaaga attttcccc 1320
aaggactctt gcttccttaa gcccttctgg ctctgtttat ggtcttcatt aaaagtataa 1380
gcctaacttt gtcgctagtc ctaaggagaa acctttaacc acaaagtttt tatcattgaa 1440
gacaatattg aacaaccccc tattttgtgg ggattgagaa ggggtgaata gaggcttgag 1500
actttccttt gtgtggtagg acttgaggaa gaaatcccct ggactttcac taaccctctg 1560

acataactccc cacacccagc tgatggcttt ccgtaataaa aagattggga tttccttttg 1620

<210> 207

<211> 296

<212> PRT

<213> Homo sapiens

<400> 207

Met Ala Val Leu Ala Pro Leu Ile Ala Leu Val Tyr Ser Val Pro Arg
1 5 10 15

Leu Ser Arg Trp Leu Ala Gln Pro Tyr Tyr Leu Leu Ser Ala Leu Leu
20 25 30

Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro Pro Leu Cys His Gly
35 40 45

Leu Pro Thr Gln Arg Glu Asp Gly Asn Pro Cys Asp Phe Asp Trp Arg
50 55 60

Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile Val Met Met Lys Asn
65 70 75 80

Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile Phe Met Phe
85 90 95

Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp Ile Arg Met
100 105 110

Gly Leu Leu Tyr Ile Thr Leu Cys Ile Val Phe Leu Met Thr Cys Lys
115 120 125

Pro Pro Leu Tyr Met Gly Pro Glu Tyr Ile Lys Tyr Phe Asn Asp Lys
130 135 140

Thr Ile Asp Glu Glu Leu Glu Arg Asp Lys Arg Val Thr Trp Ile Val
145 150 155 160

Glu Phe Phe Ala Asn Trp Ser Asn Asp Cys Gln Ser Phe Ala Pro Ile
165 170 175

Tyr Ala Asp Leu Ser Leu Lys Tyr Asn Cys Thr Gly Leu Asn Phe Gly
180 185 190

Lys Val Asp Val Gly Arg Tyr Thr Asp Val Ser Thr Arg Tyr Lys Val
195 200 205

Ser Thr Ser Pro Leu Thr Lys Gln Leu Pro Thr Leu Ile Leu Phe Gln
210 215 220

Gly Gly Lys Glu Ala Met Arg Arg Pro Gln Ile Asp Lys Lys Gly Arg
225 230 235 240

Ala Val Ser Trp Thr Phe Ser Glu Glu Asn Val Ile Arg Glu Phe Asn
245 250 255

Leu Asn Glu Leu Tyr Gln Arg Ala Lys Lys Leu Ser Lys Ala Gly Asp

260	265	270	
Asn Ile Pro Glu Glu Gln Pro Val Ala Ser Thr Pro Thr Thr Val Ser			
275	280	285	
Asp Gly Glu Asn Lys Lys Asp Lys			
290	295		
<210> 208			
<211> 24			
<212> DNA			
<213> Artificial Sequence			
<220>			
<223> Description of Artificial Sequence: Synthetic oligonucleotide probe			
<400> 208			
gcttgatat tcgcatgggc ctac			24
<210> 209			
<211> 20			
<212> DNA			
<213> Artificial Sequence			
<220>			
<223> Description of Artificial Sequence: Synthetic oligonucleotide probe			
<400> 209			
tggagacaat atccctgagg			20
<210> 210			
<211> 24			
<212> DNA			
<213> Artificial Sequence			
<220>			
<223> Description of Artificial Sequence: Synthetic oligonucleotide probe			
<400> 210			
aacagttggc cacagcatgg cagg			24
<210> 211			
<211> 50			
<212> DNA			
<213> Artificial Sequence			
<220>			
<223> Description of Artificial Sequence: Synthetic oligonucleotide probe			
<400> 211			
ccattgatga ggaactagaa cgggacaaga gggtcacttg gattgtggag			50
<210> 212			

<211> 1985
<212> DNA
<213> Homo sapiens

<400> 212
ggacagctcg cggcccccga gagctctagc cgtcgaggag ctgcctgggg acgtttgccc 60
tggggcccca gcctggcccc ggtcaccctg gcatgaggag atgggcctgt tgctcctggt 120
cccatgtctc ctgctgcccc gctcctacgg actgcccttc tacaacgggt tctactactc 180
caacagcgcc aacgaccaga acctaggcaa cggatcatgg aaagacctcc ttaatggagt 240
gaagctggtg gtggagacac ccgaggagac cctgttcacc taccaagggg ccagtgtgat 300
cctgccctgc cgctaccgtc acgagccggc cctggctctc ccgcggcgtg tgcgtgtcaa 360
atggtggaag ctgtcggaga acggggcccc agagaaggac gtgctggtgg ccacgaggct 420
gaggcaccgc tcctttgggg actaccaagg ccgctgcac ctgcggcagg acaaagagca 480
tgacgtctcg ctggagatcc aggatctgcg gctggaggac tatgggcgtt accgctgtga 540
ggtcattgac gggctggagg atgaaagcgg tctggtggag ctggagctgc ggggtgtggt 600
ctttccttac cagtccccc aacggcgcta ccagttcaac ttccacgagg gccagcagg 660
ctgtgcagag caggctgcgg tgggtggctc ctttgagcag ctcttccggg cctgggagga 720
gggcctggac tgggtgcaac cgggctggct gcaggatgct acggtgcagt accccatcat 780
gttgccccgg cagccctgcg gtggcccagg cctggcacct ggcgtgcgaa gctacggccc 840
ccgccaccgc cgctgcacc gctatgatgt attctgcttc gctactgccc tcaaggggcg 900
ggtgtactac ctggagcacc ctgagaagct gacgctgaca gaggcaaggg aggcctgcca 960
ggaagatgat gccacgatcg ccaagggtgg acagctcttt gccgcctgga agttccatgg 1020
cctggaccgc tgcgacgctg gctggctggc agatggcagc gtccgctacc ctgtggttca 1080
cccgcatcct aactgtgggc ccccagagcc tggggtccga agctttggct tccccgacc 1140
gcagagccgc ttgtacggtg tttactgcta ccgccagcac taggacctgg ggccctcccc 1200
tgccgcattc cctcactggc tgtgtattta ttgagtgggt cgttttccct tgtgggttgg 1260
agccatttta actgttttta tacttctcaa tttaaatttt ctttaaacad ttttttacta 1320
ttttttgtaa agcaaacaga acccaatgcc tccctttgct cctggatgcc ccactocagg 1380
aatcatgctt gctcccctgg gccatttgcg gttttgtggg cttctggagg gttccccgcc 1440
atccaggctg gtctccctcc ctttaaggagg ttggtgccc aagtgggcgg tggcctgtct 1500
agaatgccgc cgggagtcgg ggcatggtgg gcacagttct ccctgcccct cagcctgggg 1560
gaagaagagg gcctcggggg cctccggagc tgggctttgg gcctctcctg cccacctcta 1620
cttctctgtg aagccgctga cccagctctg cccactgagg ggctagggct ggaagccagt 1680
tctaggcttc caggcgaat ctgagggaag gaagaaactc ccctccccgt tcccctccc 1740
ctctcggttc caaagaatct gttttgttgt catttgtttc tctgtttcc ctgtgtgggg 1800
aggggccctc aggtgtgtgt actttggaca ataatggtg ctatgactgc cttccgccaa 1860
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1920
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980
aaaaa 1985

<210> 213
<211> 360
<212> PRT
<213> Homo sapiens

<400> 213
Met Gly Leu Leu Leu Leu Val Pro Leu Leu Leu Leu Pro Gly Ser Tyr
1 5 10 15
Gly Leu Pro Phe Tyr Asn Gly Phe Tyr Tyr Ser Asn Ser Ala Asn Asp
20 25 30
Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Leu Asn Gly Val Lys
35 40 45
Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr Tyr Gln Gly Ala
50 55 60

Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser
 65 70 75 80
 Pro Arg Arg Val Arg Val Lys Trp Trp Lys Leu Ser Glu Asn Gly Ala
 85 90 95
 Pro Glu Lys Asp Val Leu Val Ala Ile Gly Leu Arg His Arg Ser Phe
 100 105 110
 Gly Asp Tyr Gln Gly Arg Val His Leu Arg Gln Asp Lys Glu His Asp
 115 120 125
 Val Ser Leu Glu Ile Gln Asp Leu Arg Leu Glu Asp Tyr Gly Arg Tyr
 130 135 140
 Arg Cys Glu Val Ile Asp Gly Leu Glu Asp Glu Ser Gly Leu Val Glu
 145 150 155 160
 Leu Glu Leu Arg Gly Val Val Phe Pro Tyr Gln Ser Pro Asn Gly Arg
 165 170 175
 Tyr Gln Phe Asn Phe His Glu Gly Gln Gln Val Cys Ala Glu Gln Ala
 180 185 190
 Ala Val Val Ala Ser Phe Glu Gln Leu Phe Arg Ala Trp Glu Glu Gly
 195 200 205
 Leu Asp Trp Cys Asn Ala Gly Trp Leu Gln Asp Ala Thr Val Gln Tyr
 210 215 220
 Pro Ile Met Leu Pro Arg Gln Pro Cys Gly Gly Pro Gly Leu Ala Pro
 225 230 235 240
 Gly Val Arg Ser Tyr Gly Pro Arg His Arg Arg Leu His Arg Tyr Asp
 245 250 255
 Val Phe Cys Phe Ala Thr Ala Leu Lys Gly Arg Val Tyr Tyr Leu Glu
 260 265 270
 His Pro Glu Lys Leu Thr Leu Thr Glu Ala Arg Glu Ala Cys Gln Glu
 275 280 285
 Asp Asp Ala Thr Ile Ala Lys Val Gly Gln Leu Phe Ala Ala Trp Lys
 290 295 300
 Phe His Gly Leu Asp Arg Cys Asp Ala Gly Trp Leu Ala Asp Gly Ser
 305 310 315 320
 Val Arg Tyr Pro Val Val His Pro His Pro Asn Cys Gly Pro Pro Glu
 325 330 335
 Pro Gly Val Arg Ser Phe Gly Phe Pro Asp Pro Gln Ser Arg Leu Tyr
 340 345 350
 Gly Val Tyr Cys Tyr Arg Gln His
 355 360

<210> 214
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 214
 tgcttcgcta ctgccctc 18

 <210> 215
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 215
 ttcccttggtg ggttgag 18

 <210> 216
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 216
 agggctggaa gccagttc 18

 <210> 217
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

 <400> 217
 agccagtggag gaaatgag 18

 <210> 218
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 218
tgtccaaagt acacacacct gagg

24

<210> 219
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 219
gatgccacga tcgccaaggt gggacagctc tttgccgcct ggaag

45

<210> 220
<211> 1503
<212> DNA
<213> Homo sapiens

<400> 220
ggagagcgga gcgaagctgg ataacagggg accgatgatg tggcgaccat cagttctgct 60
gcttctgttg ctactgaggc acggggccca ggggaagcca tccccagacg caggccctca 120
tggccagggg aggggtgcacc aggcggcccc cctgagcgac gctccccatg atgacgcca 180
cggaacttc cagtacgacc atgaggcttt cctgggacgg gaagtggcca aggaattcga 240
ccaactcacc ccagaggaaa gccaggcccg tctggggcgg atcgtggacc gcatggaccg 300
cgcgggggac ggcgacggct ggggtgtcgt ggccgagctt cgcgcgtgga tcgcgcacac 360
gcagcagcgg cacatacggg actcggtag cgcggcctgg gacacgtacg acacggaccg 420
cgacgggcgt gtgggttggg aggagctgcg caacgccacc tatggccact acgcgcccgg 480
tgaagaattt catgacgtgg aggatgcaga gacctacaaa aagatgctgg ctcgggacga 540
gcggcgtttc cgggtggccg accaggatgg ggactcgatg gccactcgag aggagctgac 600
agccttcctg caccgccgag agttccctca catgcgggac atcgtgattg ctgaaaccct 660
ggaggacctg gacagaaaca aagatggcta tgtccaggtg gaggagtaca tcgcggatct 720
gtactcagcc gagcctgggg aggaggagcc ggcgtgggtg cagacggaga ggcagcagtt 780
ccgggacttc cgggatctga acaaggatgg gcacctggat gggagtgagg tgggccactg 840
ggtgctgccc cctgcccagg accagcccct ggtggaagcc aaccacctgc tgcacgagag 900
cgacacggac aaggatgggc ggctgagcaa agcggaaatc ctgggtaatt ggaacatgtt 960
tgtgggcagt caggccacca actatggcga ggacctgacc cggcaccacg atgagctgtg 1020
agcaccgcgc acctgccaca gcctcagagg cccgcacaat gaccggagga ggggccgctg 1080
tggctctggc cctccctgt ccaggccccg caggaggcag atgcagtccc aggcatactc 1140
ctgcccctgg gctctcaggg accccctggg tcggcttctg tccctgtcac accccaacc 1200
ccagggaggg gctgtcatag tcccagagga taagcaatac ctatttctga ctgagtctcc 1260
cagcccagac ccagggaccc ttggcccaaa gctcagctct aagaaccgcc ccaaccctc 1320
cagctccaaa tctgagcctc caccacatag actgaaactc ccctggcccc agccctctcc 1380
tgcttggcct ggcttgggac acctcctctc tgccaggagg caataaaagc cagcgcgggg 1440
accttgaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500
aaa 1503

<210> 221
<211> 328
<212> PRT
<213> Homo sapiens

<400> 221
Met Met Trp Arg Pro Ser Val Leu Leu Leu Leu Leu Leu Arg His
1 5 10 15

Gly	Ala	Gln	Gly	Lys	Pro	Ser	Pro	Asp	Ala	Gly	Pro	His	Gly	Gln	Gly	20	25	30
Arg	Val	His	Gln	Ala	Ala	Pro	Leu	Ser	Asp	Ala	Pro	His	Asp	Asp	Ala	35	40	45
His	Gly	Asn	Phe	Gln	Tyr	Asp	His	Glu	Ala	Phe	Leu	Gly	Arg	Glu	Val	50	55	60
Ala	Lys	Glu	Phe	Asp	Gln	Leu	Thr	Pro	Glu	Glu	Ser	Gln	Ala	Arg	Leu	65	70	75
Gly	Arg	Ile	Val	Asp	Arg	Met	Asp	Arg	Ala	Gly	Asp	Gly	Asp	Gly	Trp	85	90	95
Val	Ser	Leu	Ala	Glu	Leu	Arg	Ala	Trp	Ile	Ala	His	Thr	Gln	Gln	Arg	100	105	110
His	Ile	Arg	Asp	Ser	Val	Ser	Ala	Ala	Trp	Asp	Thr	Tyr	Asp	Thr	Asp	115	120	125
Arg	Asp	Gly	Arg	Val	Gly	Trp	Glu	Glu	Leu	Arg	Asn	Ala	Thr	Tyr	Gly	130	135	140
His	Tyr	Ala	Pro	Gly	Glu	Glu	Phe	His	Asp	Val	Glu	Asp	Ala	Glu	Thr	145	150	155
Tyr	Lys	Lys	Met	Leu	Ala	Arg	Asp	Glu	Arg	Arg	Phe	Arg	Val	Ala	Asp	165	170	175
Gln	Asp	Gly	Asp	Ser	Met	Ala	Thr	Arg	Glu	Glu	Leu	Thr	Ala	Phe	Leu	180	185	190
His	Pro	Glu	Glu	Phe	Pro	His	Met	Arg	Asp	Ile	Val	Ile	Ala	Glu	Thr	195	200	205
Leu	Glu	Asp	Leu	Asp	Arg	Asn	Lys	Asp	Gly	Tyr	Val	Gln	Val	Glu	Glu	210	215	220
Tyr	Ile	Ala	Asp	Leu	Tyr	Ser	Ala	Glu	Pro	Gly	Glu	Glu	Glu	Pro	Ala	225	230	235
Trp	Val	Gln	Thr	Glu	Arg	Gln	Gln	Phe	Arg	Asp	Phe	Arg	Asp	Leu	Asn	245	250	255
Lys	Asp	Gly	His	Leu	Asp	Gly	Ser	Glu	Val	Gly	His	Trp	Val	Leu	Pro	260	265	270
Pro	Ala	Gln	Asp	Gln	Pro	Leu	Val	Glu	Ala	Asn	His	Leu	Leu	His	Glu	275	280	285
Ser	Asp	Thr	Asp	Lys	Asp	Gly	Arg	Leu	Ser	Lys	Ala	Glu	Ile	Leu	Gly	290	295	300
Asn	Trp	Asn	Met	Phe	Val	Gly	Ser	Gln	Ala	Thr	Asn	Tyr	Gly	Glu	Asp	305	310	315
																		320

Leu Thr Arg His His Asp Glu Leu
325

<210> 222
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 222
cgcaggccct catggccagg 20

<210> 223
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 223
gaaatcctgg gtaattgg 18

<210> 224
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 224
gtgcgcggtg ctcacagctc atc 23

<210> 225
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 225
ccccctgag cgacgctccc ccatgatgac gccacggga actt 44

<210> 226
<211> 2403
<212> DNA
<213> Homo sapiens

<400> 226

```
ggggccttgc cttccgcact cgggcgcagc cgggtggatc tcgagcaggt gcggagcccc 60
ggggcggcggg cgcgggtgcg agggatccct gacgcctctg tccctgtttc tttgtcgtc 120
ccagcctgtc tgcgtcgatt ttggcgcccc cgctccccg cgggtgcgggg ttgcacaccg 180
atcctgggct tcgctcgatt tgccgcagag gcgcctccca gacctagagg ggcgtggcc 240
tggagcagcg ggtcgtctgt gtctctctc ctctgcgccg cgcccgggga tccgaagggt 300
gcggggctct gaggaggtga cgcgcggggc ctccgcacc ctggccttgc ccgcattctc 360
cctctctccc aggtgtgagc agcctatcag tcaccatgtc cgcagcctgg atcccggctc 420
tcggcctcgg tgtgtgtctg ctgctgctgc cggggcccg gggcagcag ggagccgctc 480
ccattgctat cacatgtttt accagaggct tggacatcag gaaagagaaa gcagatgtcc 540
tctgccagg gggctgccct cttgaggaat tctctgtgta tgggaacata gtatatgctt 600
ctgtatcgag catatgtggg gctgctgtcc acaggggagt aatcagcaac tcagggggac 660
ctgtacgagt ctatagccta cctggtcgag aaaactattc ctacgtagat gccaatggca 720
tccagtctca aatgctttct agatggtctg cttctttcac agtaactaaa ggcaaaagta 780
gtacacagga ggccacagga caagcagtg ccacagcaca tccaccaaca ggtaaacgac 840
taaagaaaac acccgagaag aaaactggca ataaagattg taaagcagac attgcatttc 900
tgattgatgg aagctttaat attgggcagc gccgatttaa tttacagaag aattttgttg 960
gaaaagtggc tctaattgtt ggaattggaa cagaaggacc acatgtgggc cttgttcaag 1020
ccagtgaaca tcccaaaata gaattttact tgaaaaactt tacatcagcc aaagatgttt 1080
tgtttgccat aaaggaagta ggtttcagag ggggtaattc caatacagga aaagccttga 1140
agcactactgc tcagaaaattc ttcacggtag atgctggagt aagaaaaggg atcccaaaag 1200
tggtgggtgg atttattgat ggttggcctt ctgatgacat cgaggaagca ggcattgtgg 1260
ccagagaggt tggtgtcaat gtatttatag tttctgtggc caagcctatc cctgaagaac 1320
tggggatggt tcaggatgtc acatttgttg acaaggctgt ctgtcggaat aatggcttct 1380
tctcttacca catgcccac tggtttggca ccacaaaata cgtaaagcct ctggtacaga 1440
agctgtgcac tcatgaacaa atgatgtgca gcaagacctg ttataactca gtgaacattg 1500
cctttcta at tgatggctcc agcagtggtg gagatagcaa tttccgcctc atgcttgaat 1560
ttgtttccaa catagccaag acttttgaaa tctcgacat tggtgccaag atagctgctg 1620
tacagtttac ttatgatcag cgcacggagt tcagtttcac tgactatagc accaaagaga 1680
atgtcctagc tgatcatcaga aacatccgct atatgagtgg tggaaacagct actggtgatg 1740
ccatttcctt cactgttaga aatgtgtttg gccctataag ggagagcccc aacaagaact 1800
tcctagtaat tgtcacagat gggcagtcct atgatgatgt ccaaggccct gcagctgctg 1860
cacatgatgc aggaatcact atcttctctg ttggtgtggc ttgggcacct ctggatgacc 1920
tgaaagatat ggcttctaaa ccgaaggagt ctcacgcttt cttcacaga gagttcacag 1980
gattagaacc aattgtttct gatgtcatca gaggcatttg tagagatttc ttagaatccc 2040
agcaataatg gtaacatttt gacaactgaa agaaaaagta caaggggata cagtgtgtaa 2100
attgtattct cataatactg aaatgcttta gcatactaga atcagatata aaactattaa 2160
gtatgtcaac agccatttag gcaaataagc actcctttaa agccgctgcc ttctggttac 2220
aatttacagt gtactttgtt aaaaacactg ctgaggcttc ataatcatgg ctcttagaaa 2280
ctcaggaaag aggagataat gtggattaaa accttaagag ttctaaccat gcctactaaa 2340
tgtacagata tgcaaattcc atagctcaat aaaagaatct gatacttaga ccaaaaaaaaa 2400
aaa 2403
```

<210> 227

<211> 550

<212> PRT

<213> Homo sapiens

<400> 227

Met Ser Ala Ala Trp Ile Pro Ala Leu Gly Leu Gly Val Cys Leu Leu
1 5 10 15

Leu Leu Pro Gly Pro Ala Gly Ser Glu Gly Ala Ala Pro Ile Ala Ile
20 25 30

Thr Cys Phe Thr Arg Gly Leu Asp Ile Arg Lys Glu Lys Ala Asp Val
35 40 45

Leu 50	Cys	Pro	Gly	Gly	Cys	Pro 55	Leu	Glu	Glu	Phe	Ser 60	Val	Tyr	Gly	Asn
Ile 65	Val	Tyr	Ala	Ser	Val 70	Ser	Ser	Ile	Cys	Gly 75	Ala	Ala	Val	His	Arg 80
Gly	Val	Ile	Ser	Asn 85	Ser	Gly	Gly	Pro	Val 90	Arg	Val	Tyr	Ser	Leu 95	Pro
Gly	Arg	Glu	Asn 100	Tyr	Ser	Ser	Val	Asp 105	Ala	Asn	Gly	Ile	Gln 110	Ser	Gln
Met	Leu	Ser 115	Arg	Trp	Ser	Ala	Ser 120	Phe	Thr	Val	Thr	Lys 125	Gly	Lys	Ser
Ser	Thr 130	Gln	Glu	Ala	Thr	Gly 135	Gln	Ala	Val	Ser	Thr 140	Ala	His	Pro	Pro
Thr 145	Gly	Lys	Arg	Leu	Lys 150	Lys	Thr	Pro	Glu	Lys 155	Lys	Thr	Gly	Asn	Lys 160
Asp	Cys	Lys	Ala	Asp 165	Ile	Ala	Phe	Leu	Ile 170	Asp	Gly	Ser	Phe	Asn 175	Ile
Gly	Gln	Arg	Arg 180	Phe	Asn	Leu	Gln	Lys 185	Asn	Phe	Val	Gly	Lys 190	Val	Ala
Leu	Met 195	Leu	Gly	Ile	Gly	Thr	Glu 200	Gly	Pro	His	Val	Gly 205	Leu	Val	Gln
Ala	Ser 210	Glu	His	Pro	Lys	Ile 215	Glu	Phe	Tyr	Leu	Lys 220	Asn	Phe	Thr	Ser
Ala 225	Lys	Asp	Val	Leu	Phe 230	Ala	Ile	Lys	Glu	Val 235	Gly	Phe	Arg	Gly	Gly 240
Asn	Ser	Asn	Thr	Gly 245	Lys	Ala	Leu	Lys	His 250	Thr	Ala	Gln	Lys	Phe 255	Phe
Thr	Val	Asp	Ala 260	Gly	Val	Arg	Lys	Gly 265	Ile	Pro	Lys	Val	Val 270	Val	Val
Phe	Ile 275	Asp	Gly	Trp	Pro	Ser	Asp 280	Asp	Ile	Glu	Glu	Ala 285	Gly	Ile	Val
Ala	Arg 290	Glu	Phe	Gly	Val	Asn 295	Val	Phe	Ile	Val	Ser 300	Val	Ala	Lys	Pro
Ile 305	Pro	Glu	Glu	Leu	Gly 310	Met	Val	Gln	Asp	Val 315	Thr	Phe	Val	Asp	Lys 320
Ala	Val	Cys	Arg	Asn 325	Asn	Gly	Phe	Phe	Ser 330	Tyr	His	Met	Pro	Asn 335	Trp
Phe	Gly	Thr	Thr 340	Lys	Tyr	Val	Lys	Pro 345	Leu	Val	Gln	Lys	Leu 350	Cys	Thr

His Glu Gln Met Met Cys Ser Lys Thr Cys Tyr Asn Ser Val Asn Ile
 355 360 365
 Ala Phe Leu Ile Asp Gly Ser Ser Ser Val Gly Asp Ser Asn Phe Arg
 370 375 380
 Leu Met Leu Glu Phe Val Ser Asn Ile Ala Lys Thr Phe Glu Ile Ser
 385 390 395 400
 Asp Ile Gly Ala Lys Ile Ala Ala Val Gln Phe Thr Tyr Asp Gln Arg
 405 410 415
 Thr Glu Phe Ser Phe Thr Asp Tyr Ser Thr Lys Glu Asn Val Leu Ala
 420 425 430
 Val Ile Arg Asn Ile Arg Tyr Met Ser Gly Gly Thr Ala Thr Gly Asp
 435 440 445
 Ala Ile Ser Phe Thr Val Arg Asn Val Phe Gly Pro Ile Arg Glu Ser
 450 455 460
 Pro Asn Lys Asn Phe Leu Val Ile Val Thr Asp Gly Gln Ser Tyr Asp
 465 470 475 480
 Asp Val Gln Gly Pro Ala Ala Ala Ala His Asp Ala Gly Ile Thr Ile
 485 490 495
 Phe Ser Val Gly Val Ala Trp Ala Pro Leu Asp Asp Leu Lys Asp Met
 500 505 510
 Ala Ser Lys Pro Lys Glu Ser His Ala Phe Phe Thr Arg Glu Phe Thr
 515 520 525
 Gly Leu Glu Pro Ile Val Ser Asp Val Ile Arg Gly Ile Cys Arg Asp
 530 535 540
 Phe Leu Glu Ser Gln Gln
 545 550

<210> 228

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 228

tggtctcgca caccgatc

18

<210> 229

<211> 18

<212> DNA

<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 229
 ctgctgtcca caggggag 18

<210> 230
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 230
 ccttgaagca tactgctc 18

<210> 231
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 231
 gagatagcaa tttccgcc 18

<210> 232
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 232
 ttctctcaaga gggcagcc 18

<210> 233
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 233
 cttggcacca atgtccgaga tttc 24

<210> 234
 <211> 45

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 234
gctctgagga aggtgacgcg cggggcctcc gaacccttgg ccttg 45

<210> 235
<211> 2586
<212> DNA
<213> Homo sapiens

<400> 235
cgccgcgctc ccgcacccgc ggcccgccca ccgcgcgct cccgcatctg caccgcgagc 60
ccggcggcct ccggcgggga gcgagcagat ccagtcgggc ccgcagcgca actcgggtcca 120
gtcggggcgg cggctgcggg cgcagagcgg agatgcagcg gcttggggcc accctgctgt 180
gcctgctgct ggcgggcggc gtccccacgg ccccgcgcc cgctccgacg gcgacctcgg 240
ctccagtcac gcccggcccg gctctcagct acccgcagga ggaggccacc ctcaatgaga 300
tgttccgcga ggttgaggaa ctgatggagg acacgcagca caaattgcgc agcgcggtgg 360
aagagatgga ggcagaagaa gctgctgcta aagcatcatc agaagtgaac ctggcaaact 420
tacctcccag ctatcacaaat gagaccaaca cagacacgaa ggttggaat aataccatcc 480
atgtgcaccg agaaattcac aagataacca acaaccagac tggacaaatg gtcttttcag 540
agacagttat cacatctgtg ggagacgaag aaggcagaag gagccacgag tgcacatcag 600
acgaggactg tgggcccagc atgtactgcc agtttgccag cttccagtac acctgccagc 660
catgccgggg ccagaggatg ctctgcaccc gggacagtga gtgctgtgga gaccagctgt 720
gtgtctgggg tcaactgcacc aaaatggcca ccaggggcag caatgggacc atctgtgaca 780
accagaggga ctgccagccg gggctgtgct gtgccttcca gagaggcctg ctgttccctg 840
tgtgcacacc cctgcccggtg gagggcgagc tttgccatga ccccgccagc cggcttcttg 900
acctcatcac ctgggagcta gagcctgatg gagccttgga ccgatgccct tgtgccagt 960
gcctcctctg ccagccccac agccacagcc tgggtgatgt gtgcaagccg accttcgtg 1020
ggagccgtga ccaagatggg gagatcctgc tgcccagaga ggtcccgat gagtatgaag 1080
ttggcagctt catggaggag gtgcgccagg agctggagga cctggagagg agcctgactg 1140
aagagatggc gctgggggag cctgcggctg ccgcgctgc actgctggga ggggaagaga 1200
tttagatctg gaccaggctg tgggtagatg tgcaatagaa atagctaatt tatttcccca 1260
ggtgtgtgct ttaggcgtgg gctgaccagg cttcttctta catcttcttc ccagtaagtt 1320
tcccctctgg cttgacagca tgagggtgtt tgcatttgtt cagctcccc aggtgttct 1380
ccaggttca cagtctggtg cttgggagag tcaggcaggg ttaaactgca ggagcagttt 1440
gccaccctg tccagattat tggctgcttt gcctctacca gttggcagac agccgtttgt 1500
tctacatggc tttgataatt gtttgagggg aggagatgga aacaatgtgg agtctccctc 1560
tgattggttt tggggaaatg tggagaagag tgccctgctt tgcaaacatc aacctggcaa 1620
aaatgcaaca aatgaatttt ccacgcagtt ctttccatgg gcataggtaa gctgtgcctt 1680
cagctgttgc agatgaaatg ttctgttcac cctgcattac atgtgtttat tcatccagca 1740
gtgttgctca gctcctacct ctgtgccagg gcagcatttt catatccaag atcaattccc 1800
tctctcagca cagcctgggg agggggtcat tgttctctc gtccatcagg gatctcagag 1860
gctcagagac tgcaagctgc ttgcccaagt cacacagcta gtgaagacca gagcagtttc 1920
atctggttgt gactctaagc tcagtgtctt ctccactacc ccacaccagc cttggtgcca 1980
ccaaaagtgc tccccaaaag gaaggagaat gggatttttc ttgaggcatg cacatctgga 2040
attaaggtca aactaattct cacatccctc taaaagtaaa ctactgttag gaacagcagt 2100
gttctcacag tgtggggcag ccgtccttct aatgaagaca atgatattga cactgtccct 2160
ctttggcagt tgcattagta actttgaaag gtatatgact gagcgtagca tacaggttaa 2220
cctgcagaaa cagtacttag gtaattgtag ggcgaggatt ataaatgaaa tttgcaaaat 2280
cacttagcag caactgaaga caattatcaa ccacgtggag aaaatcaaac cgagcagggc 2340
tgtgtgaaac atgggtgtaa tatgcgactg cgaacactga actctacgcc actccacaaa 2400
tgatgttttc aggtgtcatg gactgttgcc accatgtatt catccagagt tcttaaagtt 2460

taaagttgca catgattgta taagcatgct ttctttgagt tttaaattat gtataaacat 2520
aagttgcatt tagaaatcaa gcataaatca cttcaactgc aaaaaaaaaa aaaaaaaaaa 2580
aaaaaa 2586

<210> 236
<211> 350
<212> PRT
<213> Homo sapiens

<400> 236
Met Gln Arg Leu Gly Ala Thr Leu Leu Cys Leu Leu Leu Ala Ala Ala
1 5 10 15
Val Pro Thr Ala Pro Ala Pro Ala Pro Thr Ala Thr Ser Ala Pro Val
20 25 30
Lys Pro Gly Pro Ala Leu Ser Tyr Pro Gln Glu Glu Ala Thr Leu Asn
35 40 45
Glu Met Phe Arg Glu Val Glu Glu Leu Met Glu Asp Thr Gln His Lys
50 55 60
Leu Arg Ser Ala Val Glu Glu Met Glu Ala Glu Glu Ala Ala Ala Lys
65 70 75 80
Ala Ser Ser Glu Val Asn Leu Ala Asn Leu Pro Pro Ser Tyr His Asn
85 90 95
Glu Thr Asn Thr Asp Thr Lys Val Gly Asn Asn Thr Ile His Val His
100 105 110
Arg Glu Ile His Lys Ile Thr Asn Asn Gln Thr Gly Gln Met Val Phe
115 120 125
Ser Glu Thr Val Ile Thr Ser Val Gly Asp Glu Glu Gly Arg Arg Ser
130 135 140
His Glu Cys Ile Ile Asp Glu Asp Cys Gly Pro Ser Met Tyr Cys Gln
145 150 155 160
Phe Ala Ser Phe Gln Tyr Thr Cys Gln Pro Cys Arg Gly Gln Arg Met
165 170 175
Leu Cys Thr Arg Asp Ser Glu Cys Cys Gly Asp Gln Leu Cys Val Trp
180 185 190
Gly His Cys Thr Lys Met Ala Thr Arg Gly Ser Asn Gly Thr Ile Cys
195 200 205
Asp Asn Gln Arg Asp Cys Gln Pro Gly Leu Cys Cys Ala Phe Gln Arg
210 215 220
Gly Leu Leu Phe Pro Val Cys Thr Pro Leu Pro Val Glu Gly Glu Leu
225 230 235 240
Cys His Asp Pro Ala Ser Arg Leu Leu Asp Leu Ile Thr Trp Glu Leu
245 250 255

Glu Pro Asp Gly Ala Leu Asp Arg Cys Pro Cys Ala Ser Gly Leu Leu
260 265 270

Cys Gln Pro His Ser His Ser Leu Val Tyr Val Cys Lys Pro Thr Phe
275 280 285

Val Gly Ser Arg Asp Gln Asp Gly Glu Ile Leu Leu Pro Arg Glu Val
290 295 300

Pro Asp Glu Tyr Glu Val Gly Ser Phe Met Glu Glu Val Arg Gln Glu
305 310 315 320

Leu Glu Asp Leu Glu Arg Ser Leu Thr Glu Glu Met Ala Leu Gly Glu
325 330 335

Pro Ala Ala Ala Ala Ala Ala Leu Leu Gly Gly Glu Glu Ile
340 345 350

<210> 237

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

ggagctgcac cccttgc

17

<210> 238

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 238

ggaggactgt gccaccatga gagactcttc aaaccaagg caaaattgg

49

<210> 239

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 239

gcagagcggg gatgcagcgg cttg

24

<210> 240

<211> 18

<212> DNA

<213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 240
 ttggcagctt catggagg 18

<210> 241
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 241
 cctgggcaaa aatgcaac 18

<210> 242
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 242
 ctccagctcc tggcgcacct cctc 24

<210> 243
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 243
 ggctctcagc taccgcgcag gagcgaggcc accctcaatg agatg 45

<210> 244
 <211> 3679
 <212> DNA
 <213> Homo Sapien

<400> 244
 aaggaggctg ggaggaaaga ggtaagaaag gttagagaac ctacctcaca 50
 tctctctggg ctcagaagga ctctgaagat aacaataatt tcagcccatc 100
 cactctcctt ccctcccaaa cacacatgtg catgtacaca cacacataca 150
 cacacataca ccttcctctc cttaactgaa gactcacagt cactcactct 200
 gtgagcaggt catagaaaag gacactaaag ccttaaggac aggcttggcc 250
 attacctctg cagctccttt ggcttggtga gtcaaaaaac atgggagggg 300

ccaggcacgg tgactcacac ctgtaatccc agcatttttg gagaccgagg 350
tgagcagatc acttgaggtc aggagttcga gaccagcctg gccaacatgg 400
agaaaccccc atctctacta aaaatacaaa aattagccag gagtggtggc 450
agggtgctgt aatcccagct actcaggtgg ctgagccagg agaatcgctt 500
gaatccagga ggcggaggat gcagtcagct gagtgcaccg ctgcactcca 550
gcctgggtga cagaatgaga ctctgtctca aacaaacaaa cacgggagga 600
ggggtagata ctgcttctct gcaacctcct taactctgca tcctcttctt 650
ccagggtgct ccctgatggg gcctggcaat gactgagcag gcccagcccc 700
agaggacaag gaagagaagg catattgagg agggcaagaa gtgacgcccc 750
gtgtagaatg actgccctgg gagggtggtt ccttgggccc tggcagggtt 800
gctgaccctt accctgcaaa acacaaagag caggactcca gactctcctt 850
gtgaatggtc ccctgccctg cagctccacc atgaggcttc tcgtggcccc 900
actcttgcta gcttgggtgg ctggtgccac tgccactgtg cccgtggtac 950
cctggcatgt tcctgcccc cctcagtgtg cctgccagat ccggccctgg 1000
tatacgcctt gctcgtccta ccgcgaggct accactgtgg actgcaatga 1050
cctattcctg acggcagtc ccccggcact ccccgcaggc acacagaccc 1100
tgctcctgca gagcaacagc attgtccgtg tggaccagag tgagctgggc 1150
tacctggcca atctcacaga gctggacctg tcccagaaca gcttttcgga 1200
tgcccagagac tgtgatttcc atgccctgcc ccagctgctg agcctgcacc 1250
tagaggagaa ccagctgacc cggctggagg accacagctt tgcagggtg 1300
gccagcctac aggaactcta tctcaaccac aaccagctct accgcatcgc 1350
ccccagggcc ttttctggcc tcagcaactt gctgcggctg cacctcaact 1400
ccaacctcct gagggccatt gacagccgct ggtttgaaat gctgccaac 1450
ttggagatac tcatgattgg cggcaacaag gtagatgcca tcctggacat 1500
gaacttccgg cccctggcca acctgcgtag cctggtgcta gcaggcatga 1550
acctgcggga gatctccgac tatgccctgg aggggctgca aagcctggag 1600
agcctctcct tctatgacaa ccagctggcc cgggtgccca ggcgggcact 1650
ggaacaggtg cccgggctca agttcctaga cctcaacaag aaccgctcc 1700
agcgggtagg gccgggggac tttgccaaca tgctgcacct taaggagctg 1750

ggactgaaca acatggagga gctggtctcc atcgacaagt ttgccctggt 1800
gaacctcccc gagctgacca agctggacat caccaataac ccacggctgt 1850
ccttcattcca cccccgcgcc ttccaccacc tgccccagat ggagaccctc 1900
atgctcaaca acaacgctct cagtgccttg caccagcaga cggaggagtc 1950
cctgcccac acctgaggag taggtctcca cggcaacccc atccgctgtg 2000
actgtgtcat ccgctgggcc aatgccacgg gcacccgtgt ccgcttcac 2050
gagccgaat ccacctgtg tgcggagcct ccggacctcc agcgctccc 2100
ggtccgtgag gtgcccttcc gggagatgac ggaccactgt ttgcccctca 2150
tctccccacg aagcttcccc ccaagcctcc aggtagccag tggagagagc 2200
atggtgctgc attgccgggc actggccgaa cccgaacccg agatctactg 2250
ggtcactcca gctgggcttc gactgacacc tgcccatgca ggcaggaggt 2300
accgggtgta ccccgagggg acctggagc tgcggagggt gacagcagaa 2350
gaggcagggc tatacacctg tgtggcccag aacctggtgg gggctgacac 2400
taagacgggt agtgtgggtg tgggccgtgc tctcctccag ccaggcaggg 2450
acgaaggaca ggggctggag ctccgggtgc aggagacca cccctatcac 2500
atcctgctat cttgggtcac cccacccaac acagtgtcca ccaacctcac 2550
ctggctcagt gctcctccc tccggggcca gggggccaca gctctggccc 2600
gcctgcctcg ggaacccac agctacaaca ttaccgcct ccttcaggcc 2650
acggagtact gggcctgcct gcaagtggcc tttgctgatg cccacacca 2700
gttggcttgt gtatgggcca ggaccaaaga ggccacttct tgccacagag 2750
ccttagggga tegtctggg ctcatgcca tctggctct cgtgtcctt 2800
ctcctggcag ctgggctagc ggcccacctt ggcacaggcc aaccaggaa 2850
gggtgtgggt gggaggcgcc ctctccctcc agcctgggct ttctggggct 2900
ggagtgcacc ttctgtccg gttgtgtctg ctccctcgt cctgccctgg 2950
aatccaggga ggaagctgcc cagatcctca gaaggggaga cactgttgcc 3000
accattgtct caaaattctt gaagctcagc ctgttctcag cagtagagaa 3050
atcactagga ctacttttta ccaaaagaga agcagtctgg gccagatgcc 3100
ctgccaggaa agggacatgg acccacgtgc ttgaggcctg gcagctgggc 3150

caagacagat ggggctttgt ggccttggg gtgcttctgc agccttgaaa 3200
 aagttgccct tacctcctag ggtcacctct gctgccattc tgaggaacat 3250
 ctccaaggaa caggaggac tttggctaga gcctcctgcc tccccatctt 3300
 ctctctgccc agaggctcct gggcctggct tggctgtccc ctacctgtgt 3350
 ccccgggctg cacccttcc tcttctctt ctctgtacag tctcagttgc 3400
 ttgctcttgt gcctcctggg caagggtga aggaggccac tccatctcac 3450
 ctcggggggc tgcctcaat gtgggagtga cccagccag atctgaagga 3500
 catttgggag agggatgcc aggaacgcct catctcagca gcctgggctc 3550
 ggcattccga agctgacttt ctataggcaa tttgtacct ttgtggagaa 3600
 atgtgtcacc tcccccaacc cgattcactc ttttctcctg ttttgtaaaa 3650
 aataaaaata aataataaca ataaaaaaaa 3679

<210> 245
 <211> 713
 <212> PRT
 <213> Homo Sapien

<400> 245
 Met Arg Leu Leu Val Ala Pro Leu Leu Leu Ala Trp Val Ala Gly
 1 5 10 15
 Ala Thr Ala Thr Val Pro Val Val Pro Trp His Val Pro Cys Pro
 20 25 30
 Pro Gln Cys Ala Cys Gln Ile Arg Pro Trp Tyr Thr Pro Arg Ser
 35 40 45
 Ser Tyr Arg Glu Ala Thr Thr Val Asp Cys Asn Asp Leu Phe Leu
 50 55 60
 Thr Ala Val Pro Pro Ala Leu Pro Ala Gly Thr Gln Thr Leu Leu
 65 70 75
 Leu Gln Ser Asn Ser Ile Val Arg Val Asp Gln Ser Glu Leu Gly
 80 85 90
 Tyr Leu Ala Asn Leu Thr Glu Leu Asp Leu Ser Gln Asn Ser Phe
 95 100 105
 Ser Asp Ala Arg Asp Cys Asp Phe His Ala Leu Pro Gln Leu Leu
 110 115 120
 Ser Leu His Leu Glu Glu Asn Gln Leu Thr Arg Leu Glu Asp His
 125 130 135
 Ser Phe Ala Gly Leu Ala Ser Leu Gln Glu Leu Tyr Leu Asn His
 140 145 150

Asn	Gln	Leu	Tyr	Arg	Ile	Ala	Pro	Arg	Ala	Phe	Ser	Gly	Leu	Ser	
				155					160					165	
Asn	Leu	Leu	Arg	Leu	His	Leu	Asn	Ser	Asn	Leu	Leu	Arg	Ala	Ile	
				170					175					180	
Asp	Ser	Arg	Trp	Phe	Glu	Met	Leu	Pro	Asn	Leu	Glu	Ile	Leu	Met	
				185					190					195	
Ile	Gly	Gly	Asn	Lys	Val	Asp	Ala	Ile	Leu	Asp	Met	Asn	Phe	Arg	
				200					205					210	
Pro	Leu	Ala	Asn	Leu	Arg	Ser	Leu	Val	Leu	Ala	Gly	Met	Asn	Leu	
				215					220					225	
Arg	Glu	Ile	Ser	Asp	Tyr	Ala	Leu	Glu	Gly	Leu	Gln	Ser	Leu	Glu	
				230					235					240	
Ser	Leu	Ser	Phe	Tyr	Asp	Asn	Gln	Leu	Ala	Arg	Val	Pro	Arg	Arg	
				245					250					255	
Ala	Leu	Glu	Gln	Val	Pro	Gly	Leu	Lys	Phe	Leu	Asp	Leu	Asn	Lys	
				260					265					270	
Asn	Pro	Leu	Gln	Arg	Val	Gly	Pro	Gly	Asp	Phe	Ala	Asn	Met	Leu	
				275					280					285	
His	Leu	Lys	Glu	Leu	Gly	Leu	Asn	Asn	Met	Glu	Glu	Leu	Val	Ser	
				290					295					300	
Ile	Asp	Lys	Phe	Ala	Leu	Val	Asn	Leu	Pro	Glu	Leu	Thr	Lys	Leu	
				305					310					315	
Asp	Ile	Thr	Asn	Asn	Pro	Arg	Leu	Ser	Phe	Ile	His	Pro	Arg	Ala	
				320					325					330	
Phe	His	His	Leu	Pro	Gln	Met	Glu	Thr	Leu	Met	Leu	Asn	Asn	Asn	
				335					340					345	
Ala	Leu	Ser	Ala	Leu	His	Gln	Gln	Thr	Val	Glu	Ser	Leu	Pro	Asn	
				350					355					360	
Leu	Gln	Glu	Val	Gly	Leu	His	Gly	Asn	Pro	Ile	Arg	Cys	Asp	Cys	
				365					370					375	
Val	Ile	Arg	Trp	Ala	Asn	Ala	Thr	Gly	Thr	Arg	Val	Arg	Phe	Ile	
				380					385					390	
Glu	Pro	Gln	Ser	Thr	Leu	Cys	Ala	Glu	Pro	Pro	Asp	Leu	Gln	Arg	
				395					400					405	
Leu	Pro	Val	Arg	Glu	Val	Pro	Phe	Arg	Glu	Met	Thr	Asp	His	Cys	
				410					415					420	
Leu	Pro	Leu	Ile	Ser	Pro	Arg	Ser	Phe	Pro	Pro	Ser	Leu	Gln	Val	
				425					430					435	

Ala Ser Gly Glu Ser Met Val Leu His Cys Arg Ala Leu Ala Glu	440	445	450
Pro Glu Pro Glu Ile Tyr Trp Val Thr Pro Ala Gly Leu Arg Leu	455	460	465
Thr Pro Ala His Ala Gly Arg Arg Tyr Arg Val Tyr Pro Glu Gly	470	475	480
Thr Leu Glu Leu Arg Arg Val Thr Ala Glu Glu Ala Gly Leu Tyr	485	490	495
Thr Cys Val Ala Gln Asn Leu Val Gly Ala Asp Thr Lys Thr Val	500	505	510
Ser Val Val Val Gly Arg Ala Leu Leu Gln Pro Gly Arg Asp Glu	515	520	525
Gly Gln Gly Leu Glu Leu Arg Val Gln Glu Thr His Pro Tyr His	530	535	540
Ile Leu Leu Ser Trp Val Thr Pro Pro Asn Thr Val Ser Thr Asn	545	550	555
Leu Thr Trp Ser Ser Ala Ser Ser Leu Arg Gly Gln Gly Ala Thr	560	565	570
Ala Leu Ala Arg Leu Pro Arg Gly Thr His Ser Tyr Asn Ile Thr	575	580	585
Arg Leu Leu Gln Ala Thr Glu Tyr Trp Ala Cys Leu Gln Val Ala	590	595	600
Phe Ala Asp Ala His Thr Gln Leu Ala Cys Val Trp Ala Arg Thr	605	610	615
Lys Glu Ala Thr Ser Cys His Arg Ala Leu Gly Asp Arg Pro Gly	620	625	630
Leu Ile Ala Ile Leu Ala Leu Ala Val Leu Leu Leu Ala Ala Gly	635	640	645
Leu Ala Ala His Leu Gly Thr Gly Gln Pro Arg Lys Gly Val Gly	650	655	660
Gly Arg Arg Pro Leu Pro Pro Ala Trp Ala Phe Trp Gly Trp Ser	665	670	675
Ala Pro Ser Val Arg Val Val Ser Ala Pro Leu Val Leu Pro Trp	680	685	690
Asn Pro Gly Arg Lys Leu Pro Arg Ser Ser Glu Gly Glu Thr Leu	695	700	705
Leu Pro Pro Leu Ser Gln Asn Ser	710		

<210> 246
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 246
aacaaggtaa gatgccatcc tg 22

<210> 247
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 247
aaacttgtag atggagacca gctc 24

<210> 248
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 248
aggggctgca aagcctggag agcctctcct tctatgacaa ccagc 45

<210> 249
<211> 3401
<212> DNA
<213> Homo Sapien

<400> 249
gcaagccaag gcgctgtttg agaaggtgaa gaagttccgg acccatgtgg 50
aggaggggga cattgtgtac cgcctctaca tgcggcagac catcatcaag 100
gtgatcaagt tcatcctcat catctgctac accgtctact acgtgcacaa 150
catcaagttc gacgtggact gcaccgtgga cattgagagc ctgacgggct 200
accgcaccta cgcgtgtgcc cccccctgg ccacactctt caagatcctg 250
gcgtccttct acatcagcct agtcatcttc tacggcctca tctgcatgta 300
cacactgtgg tggatgctac ggcgtccct caagaagtac tcgtttgagt 350
cgatccgtga ggagagcagc tacagcgaca tccccgacgt caagaacgac 400
ttcgccttca tgctgcacct cattgaccaa tacgaccgc tctactccaa 450

gcgcttcgcc gtcttcctgt cggaggtgag tgagaacaag ctgcggcagc 500
tgaacctcaa caacgagtgg acgctggaca agctccggca gcggctcacc 550
aagaacgcgc aggacaagct ggagctgcac ctgttcatgc tcagtggcat 600
ccctgacact gtgtttgacc tgggtggagct ggaggtcctc aagctggagc 650
tgatccccga cgtgaccatc ccgcccagca ttgcccagct cacgggcctc 700
aaggagctgt ggctctacca cacagcggcc aagattgaag cgctgcgct 750
ggccttcctg cgcgagaacc tgcggggcgt gcacatcaag ttcaccgaca 800
tcaaggagat cccgctgtgg atctatagcc tgaagacact ggaggagctg 850
cacctgacgg gcaacctgag cgcggagaac aaccgctaca tcgtcatcga 900
cgggctgcgg gagctcaaac gcctcaaggt gctgcggctc aagagcaacc 950
taagcaagct gccacaggtg gtcacagatg tgggcgtgca cctgcagaag 1000
ctgtccatca acaatgaggg caccaagctc atcgtcctca acagcctcaa 1050
gaagatggcg aacctgactg agctggagct gatccgctgc gacctggagc 1100
gcatccccca ctccatcttc agcctccaca acctgcagga gattgacctc 1150
aaggacaaca acctcaagac catcgaggag atcatcagct tccagcacct 1200
gcaccgcctc acctgcctta agctgtggta caaccacatc gcctacatcc 1250
ccatccagat cggcaacctc accaacctgg agcgcctcta cctgaaccgc 1300
aacaagatcg agaagatccc caccagctc ttctactgcc gcaagctgcg 1350
ctacctggac ctcagccaca acaacctgac ctctctccct gccgacatcg 1400
gcctcctgca gaacctccag aacctagcca tcacggccaa ccg gatcgag 1450
acgtccctc cggagctctt ccagtgccgg aagctgcggg ccctgcacct 1500
gggcaacaac gtgctgcagt cactgccctc cagggtgggc gagctgacca 1550
acctgacgca gatcgagctg cggggcaacc ggctggagtg cctgcctgtg 1600
gagctgggcg agtgcccact gctcaagcgc agcggcttgg tgggtggagga 1650
ggacctgttc aacacactgc caccgaggt gaaggagcgg ctgtggaggg 1700
ctgacaagga gcaggcctga gcgaggccgg ccagcacag caagcagcag 1750
gaccgctgcc cagtctcag gcccgagggg gcaggcctag cttctcccag 1800
aactcccga cagccaggac agcctcgcgg ctgggcagga gcctggggcc 1850

gcttgtgagt caggccagag cgagaggaca gtatctgtgg ggctggcccc 1900
ttttctccct ctgagactca cgtccccag ggcaagtgt tgtggaggag 1950
agcaagtctc aagagcgag tatttgata atcagggtct cctccctgga 2000
ggccagctct gccccagggg ctgagctgcc accagaggtc ctgggaccct 2050
cactttagtt cttggtatth atttttctcc atctcccacc tccttcatcc 2100
agataactta tacattccca agaaagttca gccagatgg aaggtgttca 2150
gggaaagggtg ggctgccttt tccccttgtc cttatttagc gatgccgccg 2200
ggcatttaac acccacctgg acttcagcag agtgggtccg ggcgaaaccag 2250
ccatgggacg gtcaccacag agtgccgggc tgggctctgc ggtgcgggtcc 2300
acgggagagc aggcctccag ctggaaaggc caggcctgga gcttgcctct 2350
tcagtttttg tggcagtttt agttttttgt ttttttttt tttaatcaaa 2400
aaacaatttt ttttaaaaaa aagctttgaa aatggatggt ttgggtatta 2450
aaaagaaaaa aaaaacttaa aaaaaaaaag acactaacgg ccagtgagtt 2500
ggagtctcag ggcaggggtg cagtttccct tgagcaaagc agccagacgt 2550
tgaactgtgt ttcctttccc tgggcgcagg gtgcaggggtg tcttccggat 2600
ctggtgtgac cttggtccag gagttctatt tgttctggg gagggaggtt 2650
tttttgtttg ttttttgggt ttttttgggt tcttgttttc tttctcctcc 2700
atgtgtcttg gcaggcactc atttctgtgg ctgtcggcca gagggaatgt 2750
tctggagctg ccaaggaggg aggagactcg ggttggttaa tccccggatg 2800
aacggtgctc cattcgcacc tcccctctc gtgcctgcc tgcctctcca 2850
cgcacagtgt taaggagcca agaggagcca cttcgccag actttgtttc 2900
cccacctct gcggcattgg tgtgtccagt gccaccgtg gcctccgtg 2950
cttccatcag ccctgtcgcc acctggctct tcatgaagag cagacactta 3000
gaggctggtc gggaatgggg aggtcgcccc tgggagggca ggcgttggtt 3050
ccaagccggt tcccgtccct ggcgcctgga gtgcacacag cccagtcggc 3100
acctggtggc tggaagccaa cctgctttag atcactcggg tccccacctt 3150
agaagggtcc ccgccttaga tcaatcacgt ggacactaag gcacgtttta 3200
gagtctcttg tcttaatgat tatgtccatc cgtctgtccg tccatttggt 3250
ttttctgcgt cgtgtcattg gatataatcc tcagaaataa tgcacactag 3300

cctctgacaa ccatgaagca aaaatccgtt acatgtgggt ctgaacttgt 3350
 agactcgggtc acagtatcaa ataaaatcta taacagaaaa aaaaaaaaaa 3400
 a 3401

<210> 250

<211> 546

<212> PRT

<213> Homo Sapien

<400> 250

Met	Arg	Gln	Thr	Ile	Ile	Lys	Val	Ile	Lys	Phe	Ile	Leu	Ile	Ile
1				5					10				15	

Cys	Tyr	Thr	Val	Tyr	Tyr	Val	His	Asn	Ile	Lys	Phe	Asp	Val	Asp
				20					25				30	

Cys	Thr	Val	Asp	Ile	Glu	Ser	Leu	Thr	Gly	Tyr	Arg	Thr	Tyr	Arg
				35					40				45	

Cys	Ala	His	Pro	Leu	Ala	Thr	Leu	Phe	Lys	Ile	Leu	Ala	Ser	Phe
				50					55				60	

Tyr	Ile	Ser	Leu	Val	Ile	Phe	Tyr	Gly	Leu	Ile	Cys	Met	Tyr	Thr
				65					70				75	

Leu	Trp	Trp	Met	Leu	Arg	Arg	Ser	Leu	Lys	Lys	Tyr	Ser	Phe	Glu
				80					85				90	

Ser	Ile	Arg	Glu	Glu	Ser	Ser	Tyr	Ser	Asp	Ile	Pro	Asp	Val	Lys
				95					100				105	

Asn	Asp	Phe	Ala	Phe	Met	Leu	His	Leu	Ile	Asp	Gln	Tyr	Asp	Pro
				110					115				120	

Leu	Tyr	Ser	Lys	Arg	Phe	Ala	Val	Phe	Leu	Ser	Glu	Val	Ser	Glu
				125					130				135	

Asn	Lys	Leu	Arg	Gln	Leu	Asn	Leu	Asn	Asn	Glu	Trp	Thr	Leu	Asp
				140					145				150	

Lys	Leu	Arg	Gln	Arg	Leu	Thr	Lys	Asn	Ala	Gln	Asp	Lys	Leu	Glu
				155					160				165	

Leu	His	Leu	Phe	Met	Leu	Ser	Gly	Ile	Pro	Asp	Thr	Val	Phe	Asp
				170					175				180	

Leu	Val	Glu	Leu	Glu	Val	Leu	Lys	Leu	Glu	Leu	Ile	Pro	Asp	Val
				185					190				195	

Thr	Ile	Pro	Pro	Ser	Ile	Ala	Gln	Leu	Thr	Gly	Leu	Lys	Glu	Leu
				200					205				210	

Trp	Leu	Tyr	His	Thr	Ala	Ala	Lys	Ile	Glu	Ala	Pro	Ala	Leu	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

215	220	225
Phe Leu Arg Glu Asn Leu Arg Ala Leu	His Ile Lys Phe Thr Asp	
230	235	240
Ile Lys Glu Ile Pro Leu Trp Ile Tyr	Ser Leu Lys Thr Leu Glu	
245	250	255
Glu Leu His Leu Thr Gly Asn Leu Ser	Ala Glu Asn Asn Arg Tyr	
260	265	270
Ile Val Ile Asp Gly Leu Arg Glu Leu	Lys Arg Leu Lys Val Leu	
275	280	285
Arg Leu Lys Ser Asn Leu Ser Lys Leu	Pro Gln Val Val Thr Asp	
290	295	300
Val Gly Val His Leu Gln Lys Leu Ser	Ile Asn Asn Glu Gly Thr	
305	310	315
Lys Leu Ile Val Leu Asn Ser Leu Lys	Lys Met Ala Asn Leu Thr	
320	325	330
Glu Leu Glu Leu Ile Arg Cys Asp Leu	Glu Arg Ile Pro His Ser	
335	340	345
Ile Phe Ser Leu His Asn Leu Gln Glu	Ile Asp Leu Lys Asp Asn	
350	355	360
Asn Leu Lys Thr Ile Glu Glu Ile Ile	Ser Phe Gln His Leu His	
365	370	375
Arg Leu Thr Cys Leu Lys Leu Trp Tyr	Asn His Ile Ala Tyr Ile	
380	385	390
Pro Ile Gln Ile Gly Asn Leu Thr Asn	Leu Glu Arg Leu Tyr Leu	
395	400	405
Asn Arg Asn Lys Ile Glu Lys Ile Pro	Thr Gln Leu Phe Tyr Cys	
410	415	420
Arg Lys Leu Arg Tyr Leu Asp Leu Ser	His Asn Asn Leu Thr Phe	
425	430	435
Leu Pro Ala Asp Ile Gly Leu Leu Gln	Asn Leu Gln Asn Leu Ala	
440	445	450
Ile Thr Ala Asn Arg Ile Glu Thr Leu	Pro Pro Glu Leu Phe Gln	
455	460	465
Cys Arg Lys Leu Arg Ala Leu His Leu	Gly Asn Asn Val Leu Gln	
470	475	480
Ser Leu Pro Ser Arg Val Gly Glu Leu	Thr Asn Leu Thr Gln Ile	
485	490	495

Glu Leu Arg Gly Asn Arg Leu Glu Cys Leu Pro Val Glu Leu Gly
500 505 510

Glu Cys Pro Leu Leu Lys Arg Ser Gly Leu Val Val Glu Glu Asp
515 520 525

Leu Phe Asn Thr Leu Pro Pro Glu Val Lys Glu Arg Leu Trp Arg
530 535 540

Ala Asp Lys Glu Gln Ala
545

<210> 251
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 251
caacaatgag ggcaccaagc 20

<210> 252
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 252
gatggctagg ttctggaggt tctg 24

<210> 253
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 253
caacctgcag gagattgacc tcaaggacaa caacctcaag accatcg 47

<210> 254
<211> 1650
<212> DNA
<213> Homo Sapien

<400> 254
gcctgttgct gatgctgccg tgcggtactt gtcattggagc tggcactgcg 50
gcgctctccc gtcctcgagg ggttgctgct gctgccgctg ctgctggggc 100
tgaacgcagg agctgtcatt gactggccca cagaggaggg caaggaagta 150

tgggattatg tgacgggtccg caaggatgcc tacatgttct ggtgggtcta 200
ttatgccacc aactcctgca agaacttctc agaactgccc ctggtcattgt 250
ggcttcaggg cgggtccaggc ggttctagca ctggatttgg aaactttgag 300
gaaattgggc cccttgacag tgatctcaaa ccacggaaaa ccacctggct 350
ccaggctgcc agtctcctat ttgtggataa tcccgtgggc actgggttca 400
gttatgtgaa tggtagtggt gcctatgcca aggacctggc tatggtggct 450
tcagacatga tggttctcct gaagaccttc ttcagttgcc acaaagaatt 500
ccagacagtt ccattctaca ttttctcaga gtcctatgga ggaaaaatgg 550
cagctggcat tgggtctagag ctttataagg ccattcagcg agggaccatc 600
aagtgcact ttgcgggggt tgccttgggt gattcctgga tctccctgt 650
tgattcgggtg ctctcctggg gaccttacct gtacagcatg tctcttctcg 700
aagacaaagg tctggcagag gtgtctaagg ttgcagagca agtactgaat 750
gccgtaaata aggggtctta cagagaggcc acagagctgt gggggaaagc 800
agaaatgata attgaacaga acacagatgg ggtgaacttc tataacatct 850
taactaaaag cactcccacg tctacaatgg agtcgagtct agaattcaca 900
cagagccacc tagtttgtct ttgtcagcgc cacgtgagac acctacaacg 950
agatgcctta agccagctca tgaatggccc catcagaaag aagctcaaaa 1000
ttattcctga ggatcaatcc tggggaggcc aggctaccaa cgtctttgtg 1050
aacatggagg aggacttcat gaagccagtc attagcattg tggacgagtt 1100
gctggaggca gggatcaacg tgacgggtga taatggacag ctggatctca 1150
tcgtagatac catgggtcag gaggcctggg tgcggaaact gaagtggcca 1200
gaactgccta aattcagtca gctgaagtgg aaggccctgt acagtgaccc 1250
taaactcttg gaaacatctg cttttgtcaa gtccatacaag aaccttgctt 1300
tctactggat tctgaaagct ggtcatatgg ttccttctga ccaaggggac 1350
atggctctga agatgatgag actggtgact cagcaagaat aggatggatg 1400
gggctggaga tgagctggtt tggccttggg gcacagagct gagctgaggc 1450
cgctgaagct gtaggaagcg ccattcttcc ctgtatctaa ctggggctgt 1500
gatcaagaag gttctgacca gcttctgcag aggataaaat cattgtctct 1550
ggaggcaatt tggaaattat ttctgcttct taaaaaacc taagattttt 1600

taaaaaattg atttgttttg atcaaaataa aggatgataa tagatattaa 1650

<210> 255

<211> 452

<212> PRT

<213> Homo Sapien

<400> 255

Met	Glu	Leu	Ala	Leu	Arg	Arg	Ser	Pro	Val	Pro	Arg	Trp	Leu	Leu
1				5					10					15

Leu	Leu	Pro	Leu	Leu	Leu	Gly	Leu	Asn	Ala	Gly	Ala	Val	Ile	Asp
				20					25					30

Trp	Pro	Thr	Glu	Glu	Gly	Lys	Glu	Val	Trp	Asp	Tyr	Val	Thr	Val
				35					40					45

Arg	Lys	Asp	Ala	Tyr	Met	Phe	Trp	Trp	Leu	Tyr	Tyr	Ala	Thr	Asn
				50					55					60

Ser	Cys	Lys	Asn	Phe	Ser	Glu	Leu	Pro	Leu	Val	Met	Trp	Leu	Gln
				65					70					75

Gly	Gly	Pro	Gly	Gly	Ser	Ser	Thr	Gly	Phe	Gly	Asn	Phe	Glu	Glu
				80					85					90

Ile	Gly	Pro	Leu	Asp	Ser	Asp	Leu	Lys	Pro	Arg	Lys	Thr	Thr	Trp
				95					100					105

Leu	Gln	Ala	Ala	Ser	Leu	Leu	Phe	Val	Asp	Asn	Pro	Val	Gly	Thr
				110					115					120

Gly	Phe	Ser	Tyr	Val	Asn	Gly	Ser	Gly	Ala	Tyr	Ala	Lys	Asp	Leu
				125					130					135

Ala	Met	Val	Ala	Ser	Asp	Met	Met	Val	Leu	Leu	Lys	Thr	Phe	Phe
				140					145					150

Ser	Cys	His	Lys	Glu	Phe	Gln	Thr	Val	Pro	Phe	Tyr	Ile	Phe	Ser
				155					160					165

Glu	Ser	Tyr	Gly	Gly	Lys	Met	Ala	Ala	Gly	Ile	Gly	Leu	Glu	Leu
				170					175					180

Tyr	Lys	Ala	Ile	Gln	Arg	Gly	Thr	Ile	Lys	Cys	Asn	Phe	Ala	Gly
				185					190					195

Val	Ala	Leu	Gly	Asp	Ser	Trp	Ile	Ser	Pro	Val	Asp	Ser	Val	Leu
				200					205					210

Ser	Trp	Gly	Pro	Tyr	Leu	Tyr	Ser	Met	Ser	Leu	Leu	Glu	Asp	Lys
				215					220					225

Gly	Leu	Ala	Glu	Val	Ser	Lys	Val	Ala	Glu	Gln	Val	Leu	Asn	Ala
				230					235					240

Val Asn Lys Gly	Leu Tyr Arg Glu Ala	Thr Glu Leu Trp Gly	Lys
245		250	255
Ala Glu Met Ile	Ile Glu Gln Asn Thr	Asp Gly Val Asn Phe	Tyr
260		265	270
Asn Ile Leu Thr	Lys Ser Thr Pro Thr	Ser Thr Met Glu Ser	Ser
275		280	285
Leu Glu Phe Thr	Gln Ser His Leu Val	Cys Leu Cys Gln Arg	His
290		295	300
Val Arg His Leu	Gln Arg Asp Ala Leu	Ser Gln Leu Met Asn	Gly
305		310	315
Pro Ile Arg Lys	Lys Leu Lys Ile Ile	Pro Glu Asp Gln Ser	Trp
320		325	330
Gly Gly Gln Ala	Thr Asn Val Phe Val	Asn Met Glu Glu Asp	Phe
335		340	345
Met Lys Pro Val	Ile Ser Ile Val Asp	Glu Leu Leu Glu Ala	Gly
350		355	360
Ile Asn Val Thr	Val Tyr Asn Gly Gln	Leu Asp Leu Ile Val	Asp
365		370	375
Thr Met Gly Gln	Glu Ala Trp Val Arg	Lys Leu Lys Trp Pro	Glu
380		385	390
Leu Pro Lys Phe	Ser Gln Leu Lys Trp	Lys Ala Leu Tyr Ser	Asp
395		400	405
Pro Lys Ser Leu	Glu Thr Ser Ala Phe	Val Lys Ser Tyr Lys	Asn
410		415	420
Leu Ala Phe Tyr	Trp Ile Leu Lys Ala	Gly His Met Val Pro	Ser
425		430	435
Asp Gln Gly Asp	Met Ala Leu Lys Met	Met Arg Leu Val Thr	Gln
440		445	450

Gln Glu

<210> 256

<211> 1100

<212> DNA

<213> Homo Sapien

<400> 256

ggccgcggga gaggaggcca tgggcgcgcg cggggcgctg ctgctggcgc 50

tgctgctggc tggggtgga ctcaggaagc cggagtcgca ggaggcggcg 100

ccgttatcag gaccatgcgg ccgacgggtc atcacgtcgc gcatcgctggg 150

tggagaggac gccgaactcg ggcgttgccc gtggcagggg agcctgcgcc 200

tgtgggattc ccacgtatgc ggagtgagcc tgctcagcca ccgctgggca 250
 ctcacggcgg cgcactgctt tgaaacctat agtgacctta gtgatccctc 300
 cgggtggatg gtccagtttg gccagctgac ttccatgcca tccttctgga 350
 gcctgcaggc ctactacacc cgttacttcg tatcgaatat ctatctgagc 400
 cctcgctacc tggggaattc accctatgac attgccttgg tgaagctgtc 450
 tgcacctgtc acctacacta aacacatcca gcccatctgt ctccaggcct 500
 ccacatttga gtttgagaac cggacagact gctgggtgac tggctggggg 550
 tacatcaaag aggatgaggc actgccatct cccacacccc tccaggaagt 600
 tcaggctgcc atcataaaca actctatgtg caaccacctc ttcctcaagt 650
 acagtttccg caaggacatc tttggagaca tggtttgtgc tggcaacgcc 700
 caaggcggga aggatgcctg cttcgggtgac tcagggtggac ccttggcctg 750
 taacaagaat ggactgtggt atcagattgg agtcgtgagc tggggagtgg 800
 gctgtggtcg gcccaatcgg cccggtgtct acaccaatat cagccaccac 850
 tttgagtgga tccagaagct gatggcccag agtggcatgt cccagccaga 900
 cccctcctgg ccactactct tttccctct tctctgggct ctcccactcc 950
 tggggccggt ctgagcctac ctgagcccat gcagcctggg gccactgcca 1000
 agtcaggccc tggttctctt ctgtcttgtt tggtaataaa cacattccag 1050
 ttgatgcctt gcagggcatt cttcaaaaaa aaaaaaaaaa aaaaaaaaaa 1100

<210> 257

<211> 314

<212> PRT

<213> Homo Sapien

<400> 257

Met	Gly	Ala	Arg	Gly	Ala	Leu	Leu	Leu	Ala	Leu	Leu	Leu	Ala	Arg
1				5					10					15

Ala	Gly	Leu	Arg	Lys	Pro	Glu	Ser	Gln	Glu	Ala	Ala	Pro	Leu	Ser
				20					25				30	

Gly	Pro	Cys	Gly	Arg	Arg	Val	Ile	Thr	Ser	Arg	Ile	Val	Gly	Gly
				35					40					45

Glu	Asp	Ala	Glu	Leu	Gly	Arg	Trp	Pro	Trp	Gln	Gly	Ser	Leu	Arg
				50					55					60

Leu	Trp	Asp	Ser	His	Val	Cys	Gly	Val	Ser	Leu	Leu	Ser	His	Arg
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	65		70		75									
Trp	Ala	Leu	Thr	Ala	Ala	His	Cys	Phe	Glu	Thr	Tyr	Ser	Asp	Leu
	80								85					90
Ser	Asp	Pro	Ser	Gly	Trp	Met	Val	Gln	Phe	Gly	Gln	Leu	Thr	Ser
				95					100					105
Met	Pro	Ser	Phe	Trp	Ser	Leu	Gln	Ala	Tyr	Tyr	Thr	Arg	Tyr	Phe
				110					115					120
Val	Ser	Asn	Ile	Tyr	Leu	Ser	Pro	Arg	Tyr	Leu	Gly	Asn	Ser	Pro
				125					130					135
Tyr	Asp	Ile	Ala	Leu	Val	Lys	Leu	Ser	Ala	Pro	Val	Thr	Tyr	Thr
				140					145					150
Lys	His	Ile	Gln	Pro	Ile	Cys	Leu	Gln	Ala	Ser	Thr	Phe	Glu	Phe
				155					160					165
Glu	Asn	Arg	Thr	Asp	Cys	Trp	Val	Thr	Gly	Trp	Gly	Tyr	Ile	Lys
				170					175					180
Glu	Asp	Glu	Ala	Leu	Pro	Ser	Pro	His	Thr	Leu	Gln	Glu	Val	Gln
				185					190					195
Val	Ala	Ile	Ile	Asn	Asn	Ser	Met	Cys	Asn	His	Leu	Phe	Leu	Lys
				200					205					210
Tyr	Ser	Phe	Arg	Lys	Asp	Ile	Phe	Gly	Asp	Met	Val	Cys	Ala	Gly
				215					220					225
Asn	Ala	Gln	Gly	Gly	Lys	Asp	Ala	Cys	Phe	Gly	Asp	Ser	Gly	Gly
				230					235					240
Pro	Leu	Ala	Cys	Asn	Lys	Asn	Gly	Leu	Trp	Tyr	Gln	Ile	Gly	Val
				245					250					255
Val	Ser	Trp	Gly	Val	Gly	Cys	Gly	Arg	Pro	Asn	Arg	Pro	Gly	Val
				260					265					270
Tyr	Thr	Asn	Ile	Ser	His	His	Phe	Glu	Trp	Ile	Gln	Lys	Leu	Met
				275					280					285
Ala	Gln	Ser	Gly	Met	Ser	Gln	Pro	Asp	Pro	Ser	Trp	Pro	Leu	Leu
				290					295					300
Phe	Phe	Pro	Leu	Leu	Trp	Ala	Leu	Pro	Leu	Leu	Gly	Pro	Val	
				305					310					

<210> 258

<211> 2427

<212> DNA

<213> Homo Sapien

<400> 258

cccacgcgtc cgcggacgcg tgggaagggc agaatgggac tccaagcctg 50

cctcctaggg ctctttgccc tcatcctctc tggcaaatgc agttacagcc 100
cggagcccgga ccagcggagg acgctgcccc caggctgggt gtccctgggc 150
cgtgcggaacc ctgaggaaga gctgagtctc acctttgccc tgagacagca 200
gaatgtggaa agactctcgg agctgggtgca ggctgtgtcg gatcccagct 250
ctcctcaata cggaaaatac ctgaccctag agaattgtggc tgatctggtg 300
aggccatccc cactgaccct ccacacgggtg caaaaatggc tcttggcagc 350
cggagcccag aagtgccatt ctgtgatcac acaggacttt ctgacttgct 400
ggctgagcat ccgacaagca gagctgctgc tccctggggc tgagtttcat 450
cactatgtgg gaggacctac ggaaacccat gttgtaaggc ccccatcc 500
ctaccagctt ccacaggcct tggcccccca tgtggacttt gtggggggac 550
tgcaccgttt tcccccaaca tcatccctga ggcaacgtcc tgagccgcag 600
gtgacagga ctgtaggcct gcatctgggg gtaacccct ctgtgatccg 650
taagcgatac aacttgacct cacaagacgt gggctctggc accagcaata 700
acagccaagc ctgtgcccag ttctgggagc agtatttcca tgactcagac 750
ctggctcagt tcatgcgcct ctctgggtggc aactttgcac atcaggcatc 800
agtagcccggt gtggttggaac aacagggccg gggccgggcc gggattgagg 850
ccagtctaga tgtgcagtac ctgatgagtg ctggtgcca catctccacc 900
tgggtctaca gtagccctgg ccggcatgag ggacaggagc ccttctgca 950
gtggctcatg ctgctcagta atgagtcagc cctgccacat gtgcatactg 1000
tgagctatgg agatgatgag gactccctca gcagcgccta catccagcgg 1050
gtcaacactg agctcatgaa ggctgccgct cggggtctca ccctgctctt 1100
cgctcaggt gacagtgggg ccgggtgttg gtctgtctct ggaagacacc 1150
agttccgccc taccttcctt gcctccagcc cctatgtcac cacagtggga 1200
ggcacatcct tccaggaacc tttctcatc acaaatgaaa ttgttgacta 1250
tatcagtggt ggtggcttca gcaatgtgtt cccacggcct tcataccagg 1300
aggaagctgt aacgaagttc ctgagctcta gccccacct gccaccatcc 1350
agttacttca atgccagtgg ccgtgcctac ccagatgtgg ctgcactttc 1400
tgatggctac tgggtgggtc gcaacagagt gccattcca tgggtgtccg 1450

gaacctcggc ctctactcca gtgtttgggg ggatcctatc cttgatcaat 1500
 gagcacagga tccttagtgg ccgccccct cttggctttc tcaaccaag 1550
 gctctaccag cagcatgggg caggtctctt tgatgtaacc cgtggctgcc 1600
 atgagtcttg tctggatgaa gaggtagagg gccagggttt ctgctctggg 1650
 cctggctggg atcctgtaac aggctgggga acaccaactt cccagctttg 1700
 ctgaagactc tactcaacct ctgacccttt cctatcagga gagatggctt 1750
 gtccctgcc ctgaagctgg cagttcagtc ccttattctg ccctgttgga 1800
 agccctgctg aacctcaac tattgactgc tgcagacagc ttatctccct 1850
 aacctgaaa tgctgtgagc ttgacttgac tcccaaccct accatgctcc 1900
 atcatactca ggtctcccta ctctgcctt agattcctca ataagatgct 1950
 gtaactagca ttttttgaat gcctctccct ccgcatctca tctttctctt 2000
 ttcaatcagg cttttccaaa gggttgtata cagactctgt gcactatttc 2050
 acttgatatt cattcccaa ttcactgcaa ggagacctct actgtcacccg 2100
 tttactcttt cctaccctga catccagaaa caatggcctc cagtgcatac 2150
 ttctcaatct ttgctttatg gcctttccat catagttgcc cactccctct 2200
 ccttacttag ctccaggtc ttaacttctc tgactactct tgtcttctc 2250
 tctcatcaat ttctgcttct tcatggaatg ctgaccttca ttgctccatt 2300
 tgtagatttt tgctcttctc agtttactca ttgtcccctg gaacaaatca 2350
 ctgacatcta caaccattac catctcacta aataagactt tctatccaat 2400
 aatgattgat acctcaaag taaaaaa 2427

<210> 259

<211> 556

<212> PRT

<213> Homo Sapien

<400> 259

Met	Gly	Leu	Gln	Ala	Cys	Leu	Leu	Gly	Leu	Phe	Ala	Leu	Ile	Leu
1				5					10					15

Ser	Gly	Lys	Cys	Ser	Tyr	Ser	Pro	Glu	Pro	Asp	Gln	Arg	Arg	Thr
				20					25					30

Leu	Pro	Pro	Gly	Trp	Val	Ser	Leu	Gly	Arg	Ala	Asp	Pro	Glu	Glu
				35					40					45

Glu	Leu	Ser	Leu	Thr	Phe	Ala	Leu	Arg	Gln	Gln	Asn	Val	Glu	Arg
				50					55					60

Leu Ser Glu Leu Val Gln Ala Val Ser Asp Pro Ser Ser Pro Gln	65	70	75
Tyr Gly Lys Tyr Leu Thr Leu Glu Asn Val Ala Asp Leu Val Arg	80	85	90
Pro Ser Pro Leu Thr Leu His Thr Val Gln Lys Trp Leu Leu Ala	95	100	105
Ala Gly Ala Gln Lys Cys His Ser Val Ile Thr Gln Asp Phe Leu	110	115	120
Thr Cys Trp Leu Ser Ile Arg Gln Ala Glu Leu Leu Leu Pro Gly	125	130	135
Ala Glu Phe His His Tyr Val Gly Gly Pro Thr Glu Thr His Val	140	145	150
Val Arg Ser Pro His Pro Tyr Gln Leu Pro Gln Ala Leu Ala Pro	155	160	165
His Val Asp Phe Val Gly Gly Leu His Arg Phe Pro Pro Thr Ser	170	175	180
Ser Leu Arg Gln Arg Pro Glu Pro Gln Val Thr Gly Thr Val Gly	185	190	195
Leu His Leu Gly Val Thr Pro Ser Val Ile Arg Lys Arg Tyr Asn	200	205	210
Leu Thr Ser Gln Asp Val Gly Ser Gly Thr Ser Asn Asn Ser Gln	215	220	225
Ala Cys Ala Gln Phe Leu Glu Gln Tyr Phe His Asp Ser Asp Leu	230	235	240
Ala Gln Phe Met Arg Leu Phe Gly Gly Asn Phe Ala His Gln Ala	245	250	255
Ser Val Ala Arg Val Val Gly Gln Gln Gly Arg Gly Arg Ala Gly	260	265	270
Ile Glu Ala Ser Leu Asp Val Gln Tyr Leu Met Ser Ala Gly Ala	275	280	285
Asn Ile Ser Thr Trp Val Tyr Ser Ser Pro Gly Arg His Glu Gly	290	295	300
Gln Glu Pro Phe Leu Gln Trp Leu Met Leu Leu Ser Asn Glu Ser	305	310	315
Ala Leu Pro His Val His Thr Val Ser Tyr Gly Asp Asp Glu Asp	320	325	330
Ser Leu Ser Ser Ala Tyr Ile Gln Arg Val Asn Thr Glu Leu Met	335	340	345

Lys	Ala	Ala	Ala	Arg	Gly	Leu	Thr	Leu	Leu	Phe	Ala	Ser	Gly	Asp	350	355	360
Ser	Gly	Ala	Gly	Cys	Trp	Ser	Val	Ser	Gly	Arg	His	Gln	Phe	Arg	365	370	375
Pro	Thr	Phe	Pro	Ala	Ser	Ser	Pro	Tyr	Val	Thr	Thr	Val	Gly	Gly	380	385	390
Thr	Ser	Phe	Gln	Glu	Pro	Phe	Leu	Ile	Thr	Asn	Glu	Ile	Val	Asp	395	400	405
Tyr	Ile	Ser	Gly	Gly	Gly	Phe	Ser	Asn	Val	Phe	Pro	Arg	Pro	Ser	410	415	420
Tyr	Gln	Glu	Glu	Ala	Val	Thr	Lys	Phe	Leu	Ser	Ser	Ser	Pro	His	425	430	435
Leu	Pro	Pro	Ser	Ser	Tyr	Phe	Asn	Ala	Ser	Gly	Arg	Ala	Tyr	Pro	440	445	450
Asp	Val	Ala	Ala	Leu	Ser	Asp	Gly	Tyr	Trp	Val	Val	Ser	Asn	Arg	455	460	465
Val	Pro	Ile	Pro	Trp	Val	Ser	Gly	Thr	Ser	Ala	Ser	Thr	Pro	Val	470	475	480
Phe	Gly	Gly	Ile	Leu	Ser	Leu	Ile	Asn	Glu	His	Arg	Ile	Leu	Ser	485	490	495
Gly	Arg	Pro	Pro	Leu	Gly	Phe	Leu	Asn	Pro	Arg	Leu	Tyr	Gln	Gln	500	505	510
His	Gly	Ala	Gly	Leu	Phe	Asp	Val	Thr	Arg	Gly	Cys	His	Glu	Ser	515	520	525
Cys	Leu	Asp	Glu	Glu	Val	Glu	Gly	Gln	Gly	Phe	Cys	Ser	Gly	Pro	530	535	540
Gly	Trp	Asp	Pro	Val	Thr	Gly	Trp	Gly	Thr	Pro	Thr	Ser	Gln	Leu	545	550	555

Cys

<210> 260

<211> 1638

<212> DNA

<213> Homo Sapien

<400> 260

gccgcgcgct ctctcccgcc gccacacct gtctgagcgg cgcagcgagc 50

cgcgccccgg gcgggctgct cggcgcggaa cagtgtctgg catggcaggg 100

attccagggc tcctcttcct tctcttcttt ctgctctgtg ctgttgggca 150

agtgagccct tacagtgcc cctggaaacc cacttggcct gcataccgcc 200
tccctgtcgt cttgccccag totaccctca atttagccaa gccagacttt 250
ggagccgaag ccaaattaga agtatcttct tcatgtggac ccagtggtca 300
taagggaact ccactgcca cttacgaaga ggccaagcaa tatctgtctt 350
atgaaacgct ctatgccaat ggcagccgca cagagacgca ggtgggcatc 400
tacatcctca gcagtagtgg agatggggcc caacaccgag actcagggtc 450
ttcaggaaag tctcgaagga agcggcagat ttatggctat gacagcaggt 500
tcagcatttt tgggaaggac ttctgtctca actacccttt ctcaacatca 550
gtgaagttaa ccacgggctg caccggcacc ctggtggcag agaagcatgt 600
cctcacagct gccactgca tacacgatgg aaaaacctat gtgaaaggaa 650
cccagaagct tcgagtgggc ttctaaagc ccaagtttaa agatggtggt 700
cgaggggcca acgactccac ttcagccatg cccgagcaga tgaaatttca 750
gtggatccgg gtgaaacgca cccatgtgcc caagggttgg atcaagggca 800
atgccaatga catcggcatg gattatgatt atgccctcct ggaactcaaa 850
aagccccaca agagaaaatt tatgaagatt ggggtgagcc ctctgtctaa 900
gcagctgcca gggggcagaa ttactttctc tggttatgac aatgaccgac 950
caggcaatth ggtgtatcgc ttctgtgacg tcaaagacga gacctatgac 1000
ttgtcttacc agcaatgca tgcccagcca ggggccagcg ggtctggggt 1050
ctatgtgagg atgtggaaga gacagcagca gaagtgggag cgaaaaatta 1100
ttggcattth ttcagggcac cagtgggtgg acatgaatgg ttccccacag 1150
gatttcaacg tggctgtcag aatcactcct ctcaaataatg ccagatttg 1200
ctattggatt aaaggaaact acctggattg tagggagggg tgacacagtg 1250
ttccctcctg gcagcaatta aggtcttca tgttcttatt ttaggagagg 1300
ccaaattgth tttgtcatt ggcgtgcaca cgtgtgtgtg tgtgtgtgtg 1350
tgtgtgtaag gtgtcttata atcttttacc tatttcttac aattgcaaga 1400
tgactggctt tactatttga aaactggttt gtgtatcata tcatatatca 1450
tttaagcagt ttgaaggcat acttttgcac agaaataaaa aaaatactga 1500
tttggggcaa tgaggaatat ttgacaatta agttaatctt cacgtttttg 1550
caaactttga tttttatttc atctgaactt gtttcaaaga tttatattaa 1600

atatttggca tacaagagat atgaaaaaaa aaaaaaaa 1638

<210> 261

<211> 383

<212> PRT

<213> Homo Sapien

<400> 261

Met	Ala	Gly	Ile	Pro	Gly	Leu	Leu	Phe	Leu	Leu	Phe	Phe	Leu	Leu	
1				5					10					15	
Cys	Ala	Val	Gly	Gln	Val	Ser	Pro	Tyr	Ser	Ala	Pro	Trp	Lys	Pro	
				20					25					30	
Thr	Trp	Pro	Ala	Tyr	Arg	Leu	Pro	Val	Val	Leu	Pro	Gln	Ser	Thr	
				35					40					45	
Leu	Asn	Leu	Ala	Lys	Pro	Asp	Phe	Gly	Ala	Glu	Ala	Lys	Leu	Glu	
				50					55					60	
Val	Ser	Ser	Ser	Cys	Gly	Pro	Gln	Cys	His	Lys	Gly	Thr	Pro	Leu	
				65					70					75	
Pro	Thr	Tyr	Glu	Glu	Ala	Lys	Gln	Tyr	Leu	Ser	Tyr	Glu	Thr	Leu	
				80					85					90	
Tyr	Ala	Asn	Gly	Ser	Arg	Thr	Glu	Thr	Gln	Val	Gly	Ile	Tyr	Ile	
				95					100					105	
Leu	Ser	Ser	Ser	Gly	Asp	Gly	Ala	Gln	His	Arg	Asp	Ser	Gly	Ser	
				110					115					120	
Ser	Gly	Lys	Ser	Arg	Arg	Lys	Arg	Gln	Ile	Tyr	Gly	Tyr	Asp	Ser	
				125					130					135	
Arg	Phe	Ser	Ile	Phe	Gly	Lys	Asp	Phe	Leu	Leu	Asn	Tyr	Pro	Phe	
				140					145					150	
Ser	Thr	Ser	Val	Lys	Leu	Ser	Thr	Gly	Cys	Thr	Gly	Thr	Leu	Val	
				155					160					165	
Ala	Glu	Lys	His	Val	Leu	Thr	Ala	Ala	His	Cys	Ile	His	Asp	Gly	
				170					175					180	
Lys	Thr	Tyr	Val	Lys	Gly	Thr	Gln	Lys	Leu	Arg	Val	Gly	Phe	Leu	
				185					190					195	
Lys	Pro	Lys	Phe	Lys	Asp	Gly	Gly	Arg	Gly	Ala	Asn	Asp	Ser	Thr	
				200					205					210	
Ser	Ala	Met	Pro	Glu	Gln	Met	Lys	Phe	Gln	Trp	Ile	Arg	Val	Lys	
				215					220					225	
Arg	Thr	His	Val	Pro	Lys	Gly	Trp	Ile	Lys	Gly	Asn	Ala	Asn	Asp	
				230					235					240	

Ile Gly Met Asp Tyr Asp Tyr Ala Leu Leu Glu Leu Lys Lys Pro	245	250	255
His Lys Arg Lys Phe Met Lys Ile Gly Val Ser Pro Pro Ala Lys	260	265	270
Gln Leu Pro Gly Gly Arg Ile His Phe Ser Gly Tyr Asp Asn Asp	275	280	285
Arg Pro Gly Asn Leu Val Tyr Arg Phe Cys Asp Val Lys Asp Glu	290	295	300
Thr Tyr Asp Leu Leu Tyr Gln Gln Cys Asp Ala Gln Pro Gly Ala	305	310	315
Ser Gly Ser Gly Val Tyr Val Arg Met Trp Lys Arg Gln Gln Gln	320	325	330
Lys Trp Glu Arg Lys Ile Ile Gly Ile Phe Ser Gly His Gln Trp	335	340	345
Val Asp Met Asn Gly Ser Pro Gln Asp Phe Asn Val Ala Val Arg	350	355	360
Ile Thr Pro Leu Lys Tyr Ala Gln Ile Cys Tyr Trp Ile Lys Gly	365	370	375
Asn Tyr Leu Asp Cys Arg Glu Gly	380		

<210> 262
 <211> 1378
 <212> DNA
 <213> Homo Sapien

<400> 262
 gcacgcacct ggggtctctcg agcctgctgc ctgctcccc gccccaccag 50
 ccatggtggt ttctggagcg cccccagccc tgggtgggg ctgtctcggc 100
 acctcacct cctgctgct gctggcgtcg acagccatcc tcaatgcggc 150
 caggatacct gttccccag cctgtgggaa gcccagcag ctgaaccggg 200
 ttgtgggcgg cgaggacagc actgacagcg agtggccctg gatcgtgagc 250
 atccagaaga atgggaccca ccaactgcga ggttctctgc tcaccagccg 300
 ctgggtgatc actgctgcc actgtttcaa ggacaacctg aacaaacct 350
 acctgttctc tgtgctgctg ggggcctggc agctggggaa ccctggctct 400
 cgggtcccaga aggtgggtgt tgcctgggtg gagccccacc ctgtgtattc 450
 ctggaaggaa ggtgcctgtg cagacattgc cctggtgcgt ctgagcgct 500

ccatacagtt ctgagagcgg gtctgccc tctgcctacc tgatgcctct 550
 atccacctcc ctccaaacac ccactgctgg atctcaggct gggggagcat 600
 ccaagatgga gttcccttgc cccaccctca gacctgcag aagctgaagg 650
 ttctatcat cgactcgga gtctgcagcc atctgtactg gcggggagca 700
 ggacagggac ccactactga ggacatgctg tgtgccggct acttgagggg 750
 ggagcgggat gcttgtctgg gcgactccgg gggccccctc atgtgccagg 800
 tggacggcgc ctggctgctg gccggcatca tcagctgggg cgagggtgt 850
 gccgagcgca acaggcccgg ggtctacatc agcctctctg cgcaccgctc 900
 ctgggtggag aagatcgtgc aaggggtgca gctccgagg cgcgctcagg 950
 ggggtggggc cctcagggca ccgagccagg gctctggggc cgccgcgcgc 1000
 tcctagggcg cagcgggacg cggggctcgg atctgaaagg cggccagatc 1050
 cacatctgga tctggatctg cggcggcctc gggcggtttc ccccgccgta 1100
 aataggctca tctacctta cctctggggg cccggacggc tgctgcggaa 1150
 aggaaacccc ctccccgacc cgcccgacgg cctcaggccc ccctccaagg 1200
 catcaggccc cgccaacgg cctcatgtcc ccgccccac gacttccggc 1250
 cccgcccccg ggccccagcg cttttgtgta tataaatgtt aatgattttt 1300
 ataggtattt gtaaccctgc ccacatatct tatttattcc tccaatttca 1350
 ataaattatt tattctcaa aaaaaaaaa 1378

<210> 263
 <211> 317
 <212> PRT
 <213> Homo Sapien

<400> 263

Met	Val	Val	Ser	Gly	Ala	Pro	Pro	Ala	Leu	Gly	Gly	Gly	Cys	Leu
1				5					10				15	
Gly	Thr	Phe	Thr	Ser	Leu	Leu	Leu	Leu	Ala	Ser	Thr	Ala	Ile	Leu
				20					25				30	
Asn	Ala	Ala	Arg	Ile	Pro	Val	Pro	Pro	Ala	Cys	Gly	Lys	Pro	Gln
				35					40				45	
Gln	Leu	Asn	Arg	Val	Val	Gly	Gly	Glu	Asp	Ser	Thr	Asp	Ser	Glu
				50					55				60	
Trp	Pro	Trp	Ile	Val	Ser	Ile	Gln	Lys	Asn	Gly	Thr	His	His	Cys
				65					70				75	

Ala	Gly	Ser	Leu	Leu	Thr	Ser	Arg	Trp	Val	Ile	Thr	Ala	Ala	His	80	85	90
Cys	Phe	Lys	Asp	Asn	Leu	Asn	Lys	Pro	Tyr	Leu	Phe	Ser	Val	Leu	95	100	105
Leu	Gly	Ala	Trp	Gln	Leu	Gly	Asn	Pro	Gly	Ser	Arg	Ser	Gln	Lys	110	115	120
Val	Gly	Val	Ala	Trp	Val	Glu	Pro	His	Pro	Val	Tyr	Ser	Trp	Lys	125	130	135
Glu	Gly	Ala	Cys	Ala	Asp	Ile	Ala	Leu	Val	Arg	Leu	Glu	Arg	Ser	140	145	150
Ile	Gln	Phe	Ser	Glu	Arg	Val	Leu	Pro	Ile	Cys	Leu	Pro	Asp	Ala	155	160	165
Ser	Ile	His	Leu	Pro	Pro	Asn	Thr	His	Cys	Trp	Ile	Ser	Gly	Trp	170	175	180
Gly	Ser	Ile	Gln	Asp	Gly	Val	Pro	Leu	Pro	His	Pro	Gln	Thr	Leu	185	190	195
Gln	Lys	Leu	Lys	Val	Pro	Ile	Ile	Asp	Ser	Glu	Val	Cys	Ser	His	200	205	210
Leu	Tyr	Trp	Arg	Gly	Ala	Gly	Gln	Gly	Pro	Ile	Thr	Glu	Asp	Met	215	220	225
Leu	Cys	Ala	Gly	Tyr	Leu	Glu	Gly	Glu	Arg	Asp	Ala	Cys	Leu	Gly	230	235	240
Asp	Ser	Gly	Gly	Pro	Leu	Met	Cys	Gln	Val	Asp	Gly	Ala	Trp	Leu	245	250	255
Leu	Ala	Gly	Ile	Ile	Ser	Trp	Gly	Glu	Gly	Cys	Ala	Glu	Arg	Asn	260	265	270
Arg	Pro	Gly	Val	Tyr	Ile	Ser	Leu	Ser	Ala	His	Arg	Ser	Trp	Val	275	280	285
Glu	Lys	Ile	Val	Gln	Gly	Val	Gln	Leu	Arg	Gly	Arg	Ala	Gln	Gly	290	295	300
Gly	Gly	Ala	Leu	Arg	Ala	Pro	Ser	Gln	Gly	Ser	Gly	Ala	Ala	Ala	305	310	315

Arg Ser

<210> 264

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 264

gtccgcaagg atgcctacat gttc 24

<210> 265

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 265

gcagaggtgt ctaaggttg 19

<210> 266

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 266

agctctagac caatgccagc ttcc 24

<210> 267

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 267

gccaccaact cctgcaagaa cttctcagaa ctgcccctgg tcatg 45

<210> 268

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 268

ggggaattca ccctatgaca ttgcc 25

<210> 269

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 269
gaatgccctg caagcatcaa ctgg 24

<210> 270
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 270
gcacctgtca cctacactaa acacatccag cccatctgtc tccaggcctc 50

<210> 271
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 271
gcggaagggc agaatgggac tccaag 26

<210> 272
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 272
cagccctgcc acatgtgc 18

<210> 273
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 273
tactgggtgg tcagcaac 18

<210> 274
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 274
ggcgaagagc agggtagagac cccg 24

<210> 275

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 275

gccctcatcc tctctggcaa atgcagttac agcccggagc ccgac 45

<210> 276

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 276

gggcagggat tccagggctc c 21

<210> 277

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 277

ggctatgaca gcaggttc 18

<210> 278

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 278

tgacaatgac cgaccagg 18

<210> 279

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 279

gcatcgatt gctggtagag caag 24

<210> 280
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 280
ttacagtgcc ccctggaaac ccacttgGCC tgcataccgc ctccc 45

<210> 281
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 281
cgtctcgagc gctccataca gttcccttgc ccca 34

<210> 282
<211> 61
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 282
tgagggggga gcgggatgct tgtctgggCG actccggggg cccctcatg 50

tgccaggtgg a 61

<210> 283
<211> 119
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 283
ccctcagacc ctgcagaagc tgaaggttcc tatcatcgac tcggaagtct 50

gcagccatct gtactggcgg ggagcaggac agggacccat cactgaggac 100

atgctgtgtg ccggctact 119

<210> 284
<211> 1875
<212> DNA
<213> Homo Sapien

<400> 284
gacggctggc caccatgcac ggctcctgca gtttctgat gcttctgctg 50

ccgctactgc tactgctggt ggccaccaca ggccccgttg gagccctcac 100
agatgaggag aaacgtttga tggtaggagct gcacaacctc taccggggccc 150
aggtatcccc gacggcctca gacatgctgc acatgagatg ggacgaggag 200
ctggccgcct tcgccaaggc ctacgcacgg cagtgcgtgt gggggccacaa 250
caaggagcgc gggcgccgcg gcgagaatct gttcgccatc acagacgagg 300
gcatggacgt gccgctggcc atggaggagt ggcaccacga gcgtgagcac 350
tacaacctca gcgcccgcac ctgcagccca ggccagatgt gcggccacta 400
cacgcagggtg gtatgggcca agacagagag gatcggctgt ggttcccact 450
tctgtgagaa gctccagggt gttgaggaga ccaacatcga attactggtg 500
tgcaactatg agcctccggg gaacgtgaag gggaaacggc cctaccagga 550
ggggactccg tgctcccaat gtccctctgg ctaccactgc aagaactccc 600
tctgtgaacc catcggaagc ccggaagatg ctcaggattt gccttacctg 650
gtaactgagg ccccatcctt ccgggcgact gaagcatcag actctaggaa 700
aatgggtact ccttcttccc tagcaacggg gattccggct ttcttggtaa 750
cagagggtctc aggctccctg gcaaccaagg ctctgcctgc tgtggaaacc 800
caggccccaa cttccttagc aacgaaagac ccgccctcca tggcaacaga 850
ggctccacct tgcgtaacaa ctgagggtccc ttccattttg gcagctcaca 900
gcctgccttc cttggatgag gagccagtta ccttccccaa atcgacccat 950
gttcctatcc caaaatcagc agacaaagtg acagacaaaa caaaagtgcc 1000
ctctaggagc ccagagaact ctctggaccc caagatgtcc ctgacagggg 1050
caagggaact cctaccccat gccagaggag aggctgaggc tgaggctgag 1100
ttgcctcctt ccagtgagggt cttggcctca gtttttccag ccaggacaa 1150
gccaggtagc ctgcaggcca cactggacca cacggggcac acctcctcca 1200
agtccttgcc caatttcccc aatacctctg ccaccgctaa tgccacgggt 1250
gggcgtgccc tggctctgca gtcgtccttg ccagggtcag agggccctga 1300
caagcctagc gttgtgtcag ggctgaactc gggccctggc catgtgtggg 1350
gccctctcct gggactactg ctctgcctc ctctggtgtt ggctggaatc 1400
ttctgaatgg gataccactc aaagggtgaa gaggtcagct gtccctcctgt 1450

catcttcccc accctgtccc cagcccctaa acaagatact tcttggttaa 1500
ggccctccgg aagggaagg ctacggggca tgtgcctcat cacaccatcc 1550
atcctggagg cacaaggcct ggctggctgc gagctcagga ggccgcctga 1600
ggactgcaca cggggcccac acctctctg cccctccctc ctgagtcctg 1650
ggggtgggag gatttgagg agctcactgc ctacctggcc tggggctgtc 1700
tgccacaca gcatgtgctg tctccctgag tgctgtgta gctggggatg 1750
gggattccta ggggcagatg aaggacaagc cccactggag tggggttctt 1800
tgagtggggg aggcaggac gaggaagga aagtaactcc tgactctcca 1850
ataaaaacct gtccaacctg tgaaa 1875

<210> 285

<211> 463

<212> PRT

<213> Homo Sapien

<400> 285

Met	His	Gly	Ser	Cys	Ser	Phe	Leu	Met	Leu	Leu	Leu	Pro	Leu	Leu	1	5	10	15
Leu	Leu	Leu	Val	Ala	Thr	Thr	Gly	Pro	Val	Gly	Ala	Leu	Thr	Asp	20	25	30	
Glu	Glu	Lys	Arg	Leu	Met	Val	Glu	Leu	His	Asn	Leu	Tyr	Arg	Ala	35	40	45	
Gln	Val	Ser	Pro	Thr	Ala	Ser	Asp	Met	Leu	His	Met	Arg	Trp	Asp	50	55	60	
Glu	Glu	Leu	Ala	Ala	Phe	Ala	Lys	Ala	Tyr	Ala	Arg	Gln	Cys	Val	65	70	75	
Trp	Gly	His	Asn	Lys	Glu	Arg	Gly	Arg	Arg	Gly	Glu	Asn	Leu	Phe	80	85	90	
Ala	Ile	Thr	Asp	Glu	Gly	Met	Asp	Val	Pro	Leu	Ala	Met	Glu	Glu	95	100	105	
Trp	His	His	Glu	Arg	Glu	His	Tyr	Asn	Leu	Ser	Ala	Ala	Thr	Cys	110	115	120	
Ser	Pro	Gly	Gln	Met	Cys	Gly	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	125	130	135	
Lys	Thr	Glu	Arg	Ile	Gly	Cys	Gly	Ser	His	Phe	Cys	Glu	Lys	Leu	140	145	150	
Gln	Gly	Val	Glu	Glu	Thr	Asn	Ile	Glu	Leu	Leu	Val	Cys	Asn	Tyr	155	160	165	

Glu	Pro	Pro	Gly	Asn 170	Val	Lys	Gly	Lys	Arg 175	Pro	Tyr	Gln	Glu	Gly 180
Thr	Pro	Cys	Ser	Gln 185	Cys	Pro	Ser	Gly	Tyr 190	His	Cys	Lys	Asn	Ser 195
Leu	Cys	Glu	Pro	Ile 200	Gly	Ser	Pro	Glu	Asp 205	Ala	Gln	Asp	Leu	Pro 210
Tyr	Leu	Val	Thr	Glu 215	Ala	Pro	Ser	Phe	Arg 220	Ala	Thr	Glu	Ala	Ser 225
Asp	Ser	Arg	Lys	Met 230	Gly	Thr	Pro	Ser	Ser 235	Leu	Ala	Thr	Gly	Ile 240
Pro	Ala	Phe	Leu	Val 245	Thr	Glu	Val	Ser	Gly 250	Ser	Leu	Ala	Thr	Lys 255
Ala	Leu	Pro	Ala	Val 260	Glu	Thr	Gln	Ala	Pro 265	Thr	Ser	Leu	Ala	Thr 270
Lys	Asp	Pro	Pro	Ser 275	Met	Ala	Thr	Glu	Ala 280	Pro	Pro	Cys	Val	Thr 285
Thr	Glu	Val	Pro	Ser 290	Ile	Leu	Ala	Ala	His 295	Ser	Leu	Pro	Ser	Leu 300
Asp	Glu	Glu	Pro	Val 305	Thr	Phe	Pro	Lys	Ser 310	Thr	His	Val	Pro	Ile 315
Pro	Lys	Ser	Ala	Asp 320	Lys	Val	Thr	Asp	Lys 325	Thr	Lys	Val	Pro	Ser 330
Arg	Ser	Pro	Glu	Asn 335	Ser	Leu	Asp	Pro	Lys 340	Met	Ser	Leu	Thr	Gly 345
Ala	Arg	Glu	Leu	Leu 350	Pro	His	Ala	Gln	Glu 355	Glu	Ala	Glu	Ala	Glu 360
Ala	Glu	Leu	Pro	Pro 365	Ser	Ser	Glu	Val	Leu 370	Ala	Ser	Val	Phe	Pro 375
Ala	Gln	Asp	Lys	Pro 380	Gly	Glu	Leu	Gln	Ala 385	Thr	Leu	Asp	His	Thr 390
Gly	His	Thr	Ser	Ser 395	Lys	Ser	Leu	Pro	Asn 400	Phe	Pro	Asn	Thr	Ser 405
Ala	Thr	Ala	Asn	Ala 410	Thr	Gly	Gly	Arg	Ala 415	Leu	Ala	Leu	Gln	Ser 420
Ser	Leu	Pro	Gly	Ala 425	Glu	Gly	Pro	Asp	Lys 430	Pro	Ser	Val	Val	Ser 435
Gly	Leu	Asn	Ser	Gly 440	Pro	Gly	His	Val	Trp 445	Gly	Pro	Leu	Leu	Gly 450

Leu Leu Leu Leu Pro Pro Leu Val Leu Ala Gly Ile Phe
455 460

<210> 286
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 286
tcctgcagtt tcctgatgc 19

<210> 287
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 287
ctcatattgc acaccagtaa ttcg 24

<210> 288
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 288
atgaggagaa acgtttgatg gtggagctgc acaacctcta ccggg 45

<210> 289
<211> 3662
<212> DNA
<213> Homo Sapien

<400> 289
gtaactgaag tcaggctttt catttgggaa gccccctcaa cagaattcgg 50
tcattctcca agttatggtg gacgtacttc tgttggttctc cctctgcttg 100
ctttttcaca ttagcagacc ggacttaagt cacaacagat tatctttcat 150
caaggcaagt tccatgagcc accttcaaag ccttcgagaa gtgaaactga 200
acaacaatga attggagacc attccaaatc tgggaccagt ctcggaat 250
attacacttc tctccttggc tggaaacagg attgttgaaa tactccctga 300
acatctgaaa gagtttcagt cccttgaaac tttggacctt agcagcaaca 350
atatttcaga gctccaaact gcatttccag ccctacagct caaatatctg 400

tatctcaaca gcaaccgagt cacatcaatg gaacctgggt attttgacaa 450
tttggccaac acactccttg tgtaaagct gaacaggaac cgaatctcag 500
ctatcccacc caagatgttt aaactgcccc aactgcaaca tctcgaattg 550
aaccgaaaca agattaaaaa tgtagatgga ctgacattcc aaggccttgg 600
tgctctgaag tctctgaaaa tgcaaagaaa tggagtaacg aaacttatgg 650
atggagcttt ttgggggctg agcaacatgg aaattttgca gctggaccat 700
aacaacctaa cagagattac caaaggctgg ctttacggct tgctgatgct 750
gcaggaactt catctcagcc aaaatgccat caacaggatc agccctgatg 800
cctgggagtt ctgccagaag ctcagtgagc tggacctaac tttcaatcac 850
ttatcaagggt tagatgattc aagcttcctt ggcctaagct tactaaatac 900
actgcacatt gggaacaaca gagtcagcta cattgctgat tgtgccttcc 950
gggggctttc cagtttaaag actttggatc tgaagaacaa tgaaatttcc 1000
tggaactattg aagacatgaa tgggtgcttc tctgggcttg acaaactgag 1050
gcgactgata ctccaaggaa atcggatccg ttctattact aaaaaagcct 1100
tcaactggttt ggatgcattg gagcatctag acctgagtga caacgcaatc 1150
atgtctttac aaggcaatgc attttcacaa atgaagaaac tgcaacaatt 1200
gcatttaaat acatcaagcc ttttgtgcga ttgccagcta aaatggctcc 1250
cacagtgggt ggcggaanaa aactttcaga gctttgtaaa tgccagttgt 1300
gcccacctc agctgctaaa aggaagaagc atttttgctg ttagcccaga 1350
tggttttgtg tgtgatgatt ttcccaaacc ccagatcacg gttcagccag 1400
aaacacagtc ggcaataaaa ggttccaatt tgagtttcat ctgctcagct 1450
gccagcagca gtgattcccc aatgactttt gcttggaaaa aagacaatga 1500
actactgcat gatgctgaaa tggaaaatta tgcacacctc cgggccaag 1550
gtggcgaggt gatggagtat accaccatcc ttcggctgctg cgaggtggaa 1600
tttgccagtg aggggaaata tcagtgtgtc atctccaatc actttggttc 1650
atcctactct gtcaaagcca agcttacagt aaatatgctt ccctcattca 1700
ccaagacccc catggatctc accatccgag ctggggccat ggcacgcttg 1750
gagtgtgctg ctgtggggca cccagcccc cagatagcct ggcagaagga 1800

tgggggcaca gacttcccag ctgcacggga gagacgcatg catgtgatgc 1850
ccgaggatga cgtgttcttt atcgtggatg tgaagataga ggacattggg 1900
gtatacagct gcacagctca gaacagtga ggaagtatgt cagcaaagtc 1950
aactctgact gtcctagaaa caccatcatt tttgcggcca ctgttgagcc 2000
gaactgtaac caaggagaaa acagccgtcc tacagtgcac tgctggagga 2050
agccctcccc cttaaactgaa ctggacaaa gatgatagcc cattggtggt 2100
aaccgagagg cacttttttg cagcaggcaa tcagcttctg attattgtgg 2150
actcagatgt cagtgatgct gggaaatata catgtgagat gtctaacc 2200
cttggcactg agagaggaaa cgtgcgcctc agtgtgatcc cactccaac 2250
ctgcgactcc cctcagatga cagccccatc gttagacgat gacggatggg 2300
ccactgtggg tgtcgtgatc atagccgtgg tttgctgtgt ggtgggcacg 2350
tcactcgtgt ggggtggtcat catataccac acaaggcggg ggaatgaaga 2400
ttgcagcatt accaacacag atgagaccaa cttgccagca gatattccta 2450
gttatttgtc atctcagga acgttagctg acaggcagga tgggtacgtg 2500
tcttcagaaa gtggaagcca ccaccagttt gtcacatctt caggtgctgg 2550
atttttctta ccacaacatg acagtagtgg gacctgccat attgacaata 2600
gcagtgaagc tgatgtggaa gctgccacag atctgttcct ttgtccgttt 2650
ttgggatcca caggccctat gtatttgaag ggaaatgtgt atggctcaga 2700
tccttttgaa acatatcata caggttgcag tcctgacca agaacagttt 2750
taatggacca ctatgagccc agttacataa agaaaaagga gtgctacca 2800
tgttctcatc cttcagaaga atcctgcgaa cggagcttca gtaatatatc 2850
gtggccttca catgtgagga agctacttaa cactagttac tctcacaatg 2900
aaggacctgg aatgaaaaat ctgtgtctaa acaagtctc tttagatttt 2950
agtgc aaatc cagagccagc gtcgggtgcc tcgagtaatt ctttcatggg 3000
tacctttgga aaagctctca ggagacctca cctagatgcc tattcaagct 3050
ttggacagcc atcagattgt cagccaagag ccttttattt gaaagctcat 3100
tcttccccag acttggactc tgggtcagag gaagatggga aagaaaggac 3150
agattttcag gaagaaaatc acatttgtac ctttaaacag actttagaaa 3200
actacaggac tccaaatttt cagtcttatg acttggacac atagactgaa 3250

tgagaccaaa ggaaaagctt aacatactac ctcaagtga cttttattta 3300
 aaagagagag aatcttatgt tttttaaatg gagttatgaa ttttaaaagg 3350
 ataaaaatgc tttattttata cagatgaacc aaaattacaa aaagttatga 3400
 aaatttttat actgggaatg atgctcatat aagaatacct ttttaaacta 3450
 ttttttaact ttgttttatg caaaaaagta tcttacgtaa attaatagata 3500
 taaatcatga ttattttatg tattttttata atgccagatt tctttttatg 3550
 gaaaatgagt tactaaagca ttttaataaa tacctgcctt gtaccatttt 3600
 ttaaatagaa gttacttcat tatattttgc acattatatt taataaaatg 3650
 tgtcaatttg aa 3662

<210> 290
 <211> 1059
 <212> PRT
 <213> Homo Sapien

<400> 290
 Met Val Asp Val Leu Leu Leu Phe Ser Leu Cys Leu Leu Phe His
 1 5 10 15
 Ile Ser Arg Pro Asp Leu Ser His Asn Arg Leu Ser Phe Ile Lys
 20 25 30
 Ala Ser Ser Met Ser His Leu Gln Ser Leu Arg Glu Val Lys Leu
 35 40 45
 Asn Asn Asn Glu Leu Glu Thr Ile Pro Asn Leu Gly Pro Val Ser
 50 55 60
 Ala Asn Ile Thr Leu Leu Ser Leu Ala Gly Asn Arg Ile Val Glu
 65 70 75
 Ile Leu Pro Glu His Leu Lys Glu Phe Gln Ser Leu Glu Thr Leu
 80 85 90
 Asp Leu Ser Ser Asn Asn Ile Ser Glu Leu Gln Thr Ala Phe Pro
 95 100 105
 Ala Leu Gln Leu Lys Tyr Leu Tyr Leu Asn Ser Asn Arg Val Thr
 110 115 120
 Ser Met Glu Pro Gly Tyr Phe Asp Asn Leu Ala Asn Thr Leu Leu
 125 130 135
 Val Leu Lys Leu Asn Arg Asn Arg Ile Ser Ala Ile Pro Pro Lys
 140 145 150
 Met Phe Lys Leu Pro Gln Leu Gln His Leu Glu Leu Asn Arg Asn

	155		160		165
Lys Ile Lys Asn Val Asp Gly Leu Thr Phe Gln Gly Leu Gly Ala	170		175		180
Leu Lys Ser Leu Lys Met Gln Arg Asn Gly Val Thr Lys Leu Met	185		190		195
Asp Gly Ala Phe Trp Gly Leu Ser Asn Met Glu Ile Leu Gln Leu	200		205		210
Asp His Asn Asn Leu Thr Glu Ile Thr Lys Gly Trp Leu Tyr Gly	215		220		225
Leu Leu Met Leu Gln Glu Leu His Leu Ser Gln Asn Ala Ile Asn	230		235		240
Arg Ile Ser Pro Asp Ala Trp Glu Phe Cys Gln Lys Leu Ser Glu	245		250		255
Leu Asp Leu Thr Phe Asn His Leu Ser Arg Leu Asp Asp Ser Ser	260		265		270
Phe Leu Gly Leu Ser Leu Leu Asn Thr Leu His Ile Gly Asn Asn	275		280		285
Arg Val Ser Tyr Ile Ala Asp Cys Ala Phe Arg Gly Leu Ser Ser	290		295		300
Leu Lys Thr Leu Asp Leu Lys Asn Asn Glu Ile Ser Trp Thr Ile	305		310		315
Glu Asp Met Asn Gly Ala Phe Ser Gly Leu Asp Lys Leu Arg Arg	320		325		330
Leu Ile Leu Gln Gly Asn Arg Ile Arg Ser Ile Thr Lys Lys Ala	335		340		345
Phe Thr Gly Leu Asp Ala Leu Glu His Leu Asp Leu Ser Asp Asn	350		355		360
Ala Ile Met Ser Leu Gln Gly Asn Ala Phe Ser Gln Met Lys Lys	365		370		375
Leu Gln Gln Leu His Leu Asn Thr Ser Ser Leu Leu Cys Asp Cys	380		385		390
Gln Leu Lys Trp Leu Pro Gln Trp Val Ala Glu Asn Asn Phe Gln	395		400		405
Ser Phe Val Asn Ala Ser Cys Ala His Pro Gln Leu Leu Lys Gly	410		415		420
Arg Ser Ile Phe Ala Val Ser Pro Asp Gly Phe Val Cys Asp Asp	425		430		435
Phe Pro Lys Pro Gln Ile Thr Val Gln Pro Glu Thr Gln Ser Ala					

440	445	450
Ile Lys Gly Ser Asn Leu Ser Phe Ile Cys Ser Ala Ala Ser Ser		
455	460	465
Ser Asp Ser Pro Met Thr Phe Ala Trp Lys Lys Asp Asn Glu Leu		
470	475	480
Leu His Asp Ala Glu Met Glu Asn Tyr Ala His Leu Arg Ala Gln		
485	490	495
Gly Gly Glu Val Met Glu Tyr Thr Thr Ile Leu Arg Leu Arg Glu		
500	505	510
Val Glu Phe Ala Ser Glu Gly Lys Tyr Gln Cys Val Ile Ser Asn		
515	520	525
His Phe Gly Ser Ser Tyr Ser Val Lys Ala Lys Leu Thr Val Asn		
530	535	540
Met Leu Pro Ser Phe Thr Lys Thr Pro Met Asp Leu Thr Ile Arg		
545	550	555
Ala Gly Ala Met Ala Arg Leu Glu Cys Ala Ala Val Gly His Pro		
560	565	570
Ala Pro Gln Ile Ala Trp Gln Lys Asp Gly Gly Thr Asp Phe Pro		
575	580	585
Ala Ala Arg Glu Arg Arg Met His Val Met Pro Glu Asp Asp Val		
590	595	600
Phe Phe Ile Val Asp Val Lys Ile Glu Asp Ile Gly Val Tyr Ser		
605	610	615
Cys Thr Ala Gln Asn Ser Ala Gly Ser Ile Ser Ala Asn Ala Thr		
620	625	630
Leu Thr Val Leu Glu Thr Pro Ser Phe Leu Arg Pro Leu Leu Asp		
635	640	645
Arg Thr Val Thr Lys Gly Glu Thr Ala Val Leu Gln Cys Ile Ala		
650	655	660
Gly Gly Ser Pro Pro Pro Lys Leu Asn Trp Thr Lys Asp Asp Ser		
665	670	675
Pro Leu Val Val Thr Glu Arg His Phe Phe Ala Ala Gly Asn Gln		
680	685	690
Leu Leu Ile Ile Val Asp Ser Asp Val Ser Asp Ala Gly Lys Tyr		
695	700	705
Thr Cys Glu Met Ser Asn Thr Leu Gly Thr Glu Arg Gly Asn Val		
710	715	720

Arg	Leu	Ser	Val	Ile	Pro	Thr	Pro	Thr	Cys	Asp	Ser	Pro	Gln	Met	
				725					730					735	
Thr	Ala	Pro	Ser	Leu	Asp	Asp	Asp	Gly	Trp	Ala	Thr	Val	Gly	Val	
				740					745					750	
Val	Ile	Ile	Ala	Val	Val	Cys	Cys	Val	Val	Gly	Thr	Ser	Leu	Val	
				755					760					765	
Trp	Val	Val	Ile	Ile	Tyr	His	Thr	Arg	Arg	Arg	Asn	Glu	Asp	Cys	
				770					775					780	
Ser	Ile	Thr	Asn	Thr	Asp	Glu	Thr	Asn	Leu	Pro	Ala	Asp	Ile	Pro	
				785					790					795	
Ser	Tyr	Leu	Ser	Ser	Gln	Gly	Thr	Leu	Ala	Asp	Arg	Gln	Asp	Gly	
				800					805					810	
Tyr	Val	Ser	Ser	Glu	Ser	Gly	Ser	His	His	Gln	Phe	Val	Thr	Ser	
				815					820					825	
Ser	Gly	Ala	Gly	Phe	Phe	Leu	Pro	Gln	His	Asp	Ser	Ser	Gly	Thr	
				830					835					840	
Cys	His	Ile	Asp	Asn	Ser	Ser	Glu	Ala	Asp	Val	Glu	Ala	Ala	Thr	
				845					850					855	
Asp	Leu	Phe	Leu	Cys	Pro	Phe	Leu	Gly	Ser	Thr	Gly	Pro	Met	Tyr	
				860					865					870	
Leu	Lys	Gly	Asn	Val	Tyr	Gly	Ser	Asp	Pro	Phe	Glu	Thr	Tyr	His	
				875					880					885	
Thr	Gly	Cys	Ser	Pro	Asp	Pro	Arg	Thr	Val	Leu	Met	Asp	His	Tyr	
				890					895					900	
Glu	Pro	Ser	Tyr	Ile	Lys	Lys	Lys	Glu	Cys	Tyr	Pro	Cys	Ser	His	
				905					910					915	
Pro	Ser	Glu	Glu	Ser	Cys	Glu	Arg	Ser	Phe	Ser	Asn	Ile	Ser	Trp	
				920					925					930	
Pro	Ser	His	Val	Arg	Lys	Leu	Leu	Asn	Thr	Ser	Tyr	Ser	His	Asn	
				935					940					945	
Glu	Gly	Pro	Gly	Met	Lys	Asn	Leu	Cys	Leu	Asn	Lys	Ser	Ser	Leu	
				950					955					960	
Asp	Phe	Ser	Ala	Asn	Pro	Glu	Pro	Ala	Ser	Val	Ala	Ser	Ser	Asn	
				965					970					975	
Ser	Phe	Met	Gly	Thr	Phe	Gly	Lys	Ala	Leu	Arg	Arg	Pro	His	Leu	
				980					985					990	
Asp	Ala	Tyr	Ser	Ser	Phe	Gly	Gln	Pro	Ser	Asp	Cys	Gln	Pro	Arg	
				995					1000					1005	

Ala	Phe	Tyr	Leu	Lys	Ala	His	Ser	Ser	Pro	Asp	Leu	Asp	Ser	Gly
			1010						1015					1020
Ser	Glu	Glu	Asp	Gly	Lys	Glu	Arg	Thr	Asp	Phe	Gln	Glu	Glu	Asn
			1025						1030					1035
His	Ile	Cys	Thr	Phe	Lys	Gln	Thr	Leu	Glu	Asn	Tyr	Arg	Thr	Pro
			1040						1045					1050
Asn	Phe	Gln	Ser	Tyr	Asp	Leu	Asp	Thr						
			1055											

<210> 291
 <211> 2906
 <212> DNA
 <213> Homo Sapien

<400> 291
 ggggagagga attgaccatg taaaaggaga cttttttttt tgggtggtggt 50
 ggctgttggg tgccttgcaa aaatgaagga tgcaggacgc agctttctcc 100
 tggaaccgaa cgcaatgat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtggt ctgacataaa taaataatct taaagcagct gttcccctcc 300
 ccacccccaa aaaaaaggat gattggaaat gaagaaccga ggattcaca 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggctt ttttagtaaa gtaaagaact 450
 ggtgtggtgg tgttttcctt tctttttgaa tttcccacaa gaggagagga 500
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650
 ttcacaaacc tccttttttt taaattttta ttccttttgg tatcaagatc 700
 atgcgttttc tcttgttctt aaccacctgg atttccatct ggatgttgct 750
 gtgatcagtc tgaaatacaa ctgtttgaat tccagaagga ccaacaccag 800
 ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850
 ataggtccta ggtttaacag ggccctatct gacccctgc ttgtggtgct 900
 gctggctctt caacttcttg tgggtggctg tctggtgcg gctcagacct 950

gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000
cggaataacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050
gctgaacctc catgagaacc aaatccagat catcaaagtg aacagcttca 1100
agcacttgag gcacttgga atcctacagt tgagtaggaa ccatatcaga 1150
accattgaaa ttggggcttt caatggctctg gcgaacctca acactctgga 1200
actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250
tgtctaaact gaaggagctc tggttgcgaa acaaccccat tgaaagcatc 1300
ccttcttatg cttttaacag aattccttct ttgcgccgac tagacttagg 1350
ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggctctgt 1400
ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaaatccct 1450
aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500
tttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550
aactgtggat gatacagtcc cagattcaag tgattgaacg gaatgccttt 1600
gacaaccttc agtcactagt ggagatcaac ctggcacaca ataactaac 1650
attactgcct catgacctct tcaactccctt gcatcatcta gagcggatac 1700
atttacatca caaccttgg aactgtaact gtgacatact gtggctcagc 1750
tggtggataa aagacatggc cccctcgaac acagcttggt gtgcccgggtg 1800
taacactcct cccaatctaa aggggaggta cattggagag ctgcaccaga 1850
attacttcac atgctatgct ccggtgattg tggagcccc tgacagacctc 1900
aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950
cctgacatct gtatcttggg ttactccaaa tggaaacagtc atgacacatg 2000
gggcgtacaa agtgcgata gctgtgctca gtgatggtac gttaaatttc 2050
acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtagagta 2100
ttccgttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150
ccactactcc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200
ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtcccactcc 2250
agtggtcgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300
gcacaaggtc gacagagaaa accttcacca tcccagtgac tgatataaac 2350
agtgggatcc caggaattga tgaggatcat aagactacca aaatcatcat 2400

tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgccccaaca 2500
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaaagc cacctgcca tgctgtctat cgagcatgag cacctaaatc 2600
 actataactc atacaaatct cccttcaacc acacaacaac agttaacaca 2650
 ataaattcaa tacacagttc agtgcataaa ccgttattga tccgaatgaa 2700
 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750
 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaaca 2850
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900
 caaaaa 2906

<210> 292

<211> 640

<212> PRT

<213> Homo Sapien

<400> 292

Met	Leu	Asn	Lys	Met	Thr	Leu	His	Pro	Gln	Gln	Ile	Met	Ile	Gly
1				5					10					15
Pro	Arg	Phe	Asn	Arg	Ala	Leu	Phe	Asp	Pro	Leu	Leu	Val	Val	Leu
			20						25					30
Leu	Ala	Leu	Gln	Leu	Leu	Val	Val	Ala	Gly	Leu	Val	Arg	Ala	Gln
			35						40					45
Thr	Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val
			50						55					60
Ile	Cys	Val	Arg	Lys	Asn	Leu	Arg	Glu	Val	Pro	Asp	Gly	Ile	Ser
			65						70					75
Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile
			80						85					90
Ile	Lys	Val	Asn	Ser	Phe	Lys	His	Leu	Arg	His	Leu	Glu	Ile	Leu
			95						100					105
Gln	Leu	Ser	Arg	Asn	His	Ile	Arg	Thr	Ile	Glu	Ile	Gly	Ala	Phe
			110						115					120
Asn	Gly	Leu	Ala	Asn	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Arg
			125						130					135
Leu	Thr	Thr	Ile	Pro	Asn	Gly	Ala	Phe	Val	Tyr	Leu	Ser	Lys	Leu

	140		145		150
Lys Glu Leu Trp	Leu Arg Asn Asn Pro	Ile Glu Ser Ile Pro Ser			
	155		160		165
Tyr Ala Phe Asn	Arg Ile Pro Ser Leu	Arg Arg Leu Asp Leu Gly			
	170		175		180
Glu Leu Lys Arg	Leu Ser Tyr Ile Ser	Glu Gly Ala Phe Glu Gly			
	185		190		195
Leu Ser Asn Leu	Arg Tyr Leu Asn Leu	Ala Met Cys Asn Leu Arg			
	200		205		210
Glu Ile Pro Asn	Leu Thr Pro Leu Ile	Lys Leu Asp Glu Leu Asp			
	215		220		225
Leu Ser Gly Asn	His Leu Ser Ala Ile	Arg Pro Gly Ser Phe Gln			
	230		235		240
Gly Leu Met His	Leu Gln Lys Leu Trp	Met Ile Gln Ser Gln Ile			
	245		250		255
Gln Val Ile Glu	Arg Asn Ala Phe Asp	Asn Leu Gln Ser Leu Val			
	260		265		270
Glu Ile Asn Leu	Ala His Asn Asn Leu	Thr Leu Leu Pro His Asp			
	275		280		285
Leu Phe Thr Pro	Leu His His Leu Glu	Arg Ile His Leu His His			
	290		295		300
Asn Pro Trp Asn	Cys Asn Cys Asp Ile	Leu Trp Leu Ser Trp Trp			
	305		310		315
Ile Lys Asp Met	Ala Pro Ser Asn Thr	Ala Cys Cys Ala Arg Cys			
	320		325		330
Asn Thr Pro Pro	Asn Leu Lys Gly Arg	Tyr Ile Gly Glu Leu Asp			
	335		340		345
Gln Asn Tyr Phe	Thr Cys Tyr Ala Pro	Val Ile Val Glu Pro Pro			
	350		355		360
Ala Asp Leu Asn	Val Thr Glu Gly Met	Ala Ala Glu Leu Lys Cys			
	365		370		375
Arg Ala Ser Thr	Ser Leu Thr Ser Val	Ser Trp Ile Thr Pro Asn			
	380		385		390
Gly Thr Val Met	Thr His Gly Ala Tyr	Lys Val Arg Ile Ala Val			
	395		400		405
Leu Ser Asp Gly	Thr Leu Asn Phe Thr	Asn Val Thr Val Gln Asp			
	410		415		420
Thr Gly Met Tyr	Thr Cys Met Val Ser	Asn Ser Val Gly Asn Thr			

425	430	435
Thr Ala Ser Ala Thr Leu Asn Val Thr	Ala Ala Thr Thr Thr	Pro
440	445	450
Phe Ser Tyr Phe Ser Thr Val Thr Val	Glu Thr Met Glu Pro Ser	
455	460	465
Gln Asp Glu Ala Arg Thr Thr Asp Asn	Asn Val Gly Pro Thr Pro	
470	475	480
Val Val Asp Trp Glu Thr Thr Asn Val	Thr Thr Ser Leu Thr Pro	
485	490	495
Gln Ser Thr Arg Ser Thr Glu Lys Thr	Phe Thr Ile Pro Val Thr	
500	505	510
Asp Ile Asn Ser Gly Ile Pro Gly Ile	Asp Glu Val Met Lys Thr	
515	520	525
Thr Lys Ile Ile Ile Gly Cys Phe Val	Ala Ile Thr Leu Met Ala	
530	535	540
Ala Val Met Leu Val Ile Phe Tyr Lys	Met Arg Lys Gln His His	
545	550	555
Arg Gln Asn His His Ala Pro Thr Arg	Thr Val Glu Ile Ile Asn	
560	565	570
Val Asp Asp Glu Ile Thr Gly Asp Thr	Pro Met Glu Ser His Leu	
575	580	585
Pro Met Pro Ala Ile Glu His Glu His	Leu Asn His Tyr Asn Ser	
590	595	600
Tyr Lys Ser Pro Phe Asn His Thr Thr	Thr Val Asn Thr Ile Asn	
605	610	615
Ser Ile His Ser Ser Val His Glu Pro	Leu Leu Ile Arg Met Asn	
620	625	630
Ser Lys Asp Asn Val Gln Glu Thr Gln	Ile	
635	640	

<210> 293

<211> 4053

<212> DNA

<213> Homo Sapien

<400> 293

agccgacgct gctcaagctg caactctgtt gcagttggca gttcttttcg 50

gtttccctcc tgctgttttg gggcatgaaa gggcttcgcc gccgggagta 100

aaagaaggaa ttgaccgggc agcgcgaggg aggagcgcg acgcgaccgc 150

gagggcgggc gtgcaccctc ggctggaagt ttgtgccggg ccccgagcgc 200
gcgccggctg ggagcttcgg gtagagacct aggccgctgg accgcgatga 250
gcgcgccgag cctccgtgcg cgcgccgcgg ggttggggct gctgctgtgc 300
gcggtgctgg ggcgcgctgg ccggtccgac agcggcggtc gcggggaact 350
cgggcagccc tctggggtag ccgcgcgagc cccatgcccc actacctgcc 400
gctgcctcgg ggacctgctg gactgcagtc gtaagcggct agcgcgtctt 450
cccgagccac tcccgtcctg ggtcgctcgg ctggacttaa gtcacaacag 500
attatctttc atcaaggcaa gttccatgag ccaccttcaa agccttcgag 550
aagtgaacct gaacaacaat gaattggaga ccattccaaa tctgggacca 600
gtctcggcaa atattacact tctctccttg gctggaaaca ggattgttga 650
aatactccct gaacatctga aagagtttca gtcccttgaa actttggacc 700
ttagcagcaa caatatttca gagctccaaa ctgcatttcc agccctacag 750
ctcaaataatc tgtatctcaa cagcaaccga gtcacatcaa tggaacctgg 800
gtattttgac aatttggcca acacactcct tgtgttaaag ctgaacagga 850
accgaatctc agctatccca cccaagatgt ttaaactgcc ccaactgcaa 900
catctcgaat tgaaccgaaa caagattaaa aatgtagatg gactgacatt 950
ccaaggcctt ggtgctctga agtctctgaa aatgcaaaga aatggagtaa 1000
cgaaacttat ggatggagct ttttgggggc tgagcaacat ggaaattttg 1050
cagctggacc ataacaacct aacagagatt accaaaggct ggctttacgg 1100
cttgctgatg ctgcaggaaac ttcattctcag ccaaaatgcc atcaacagga 1150
tcagccctga tgccctgggag ttctgccaga agctcagtga gctggacctt 1200
actttcaatc acttatcaag gttagatgat tcaagcttcc ttggcctaag 1250
cttactaaat aactgcaca ttgggaacaa cagagtcagc tacattgctg 1300
attgtgcctt ccgggggctt tccagtttaa agactttgga tctgaagaac 1350
aatgaaatth cctggactat tgaagacatg aatggtgctt tctctgggct 1400
tgacaaactg aggcgactga tactccaagg aaatcggatc cgttctatta 1450
ctaaaaaagc cttcactggg ttggatgcat tggagcatct agacctgagt 1500
gacaacgcaa tcatgtcttt acaaggcaat gcattttcac aaatgaagaa 1550
actgcaacaa ttgcatttaa atacatcaag ctttttgtgc gattgccagc 1600

taaaatggct cccacagtgg gtggcgga aaactttca gagctttgta 1650
aatgccagtt gtgccatcc tcagctgcta aaaggaagaa gcatttttgc 1700
tgtagccca gatggctttg tgtgtgatga tttcccaaa cccagatca 1750
cggttcagcc agaaacacag tcggcaataa aaggttcaa tttgagtttc 1800
atctgctcag ctgccagcag cagtgattcc ccaatgactt ttgcttgaa 1850
aaaagacaat gaactactgc atgatgctga aatggaaaat tatgcacacc 1900
tccgggcca aggtggcgag gtgatggagt ataccacat ccttcggctg 1950
cgcgaggtgg aatttgccag tgaggggaaa tatcagtgtg tcactccaa 2000
tcactttgt tcactact ctgtcaaagc caagcttaca gtaaataatgc 2050
ttccctcatt caccaagacc cccatggatc tcaccatccg agctggggcc 2100
atggcacgct tggagtgtgc tgctgtggg caccagccc cccagatagc 2150
ctggcagaag gatgggggca cagacttccc agctgcacgg gagagacgca 2200
tgcatgtgat gcccgaggat gacgtgttct ttatcgtgga tgtgaagata 2250
gaggacattg gggatatacag ctgcacagct cagaacagtg caggaagtat 2300
ttcagcaaat gcaactctga ctgtcctaga aacaccatca tttttgcggc 2350
cactgttgga ccgaactgta accaaggag aaacagccgt cctacagtgc 2400
attgctggag gaagccctcc ccctaaactg aactggacca aagatgatag 2450
cccattggtg gtaaccgaga ggcacttttt tgcagcaggc aatcagcttc 2500
tgattattgt ggactcagat gtcagtgatg ctgggaaata cacatgtgag 2550
atgtctaaca cccttggcac tgagagagga aacgtgcgcc tcagtgtgat 2600
cccactcca acctgcgact ccctcagat gacagccca tcgttagacg 2650
atgaaggatg ggccactgtg ggtgtcgtga tcatagccgt ggtttgctgt 2700
gtggtgggca cgtcactcgt gtgggtggtc atcatatacc acacaaggcg 2750
gaggaatgaa gattgcagca ttaccaacac agatgagacc aacttgccag 2800
cagatattcc tagttatttg tcactcagg gaacgttagc tgacaggcag 2850
gatgggtacg tgtcttcaga aagtgaagc caccaccagt ttgtcacatc 2900
ttcagggtgt ggatttttct taccacaaca tgacagtagt gggacctgcc 2950
atattgaaa tagcagtga gctgatgtgg aagctgccac agatctgttc 3000

ctttgtccgt ttttgggatc cacaggccct atgtatttga agggaaatgt 3050
 gtatggctca gatccttttg aaacatatca tacaggttgc agtcctgacc 3100
 caagaacagt tttaatggac cactatgagc ccagttacat aaagaaaaag 3150
 gagtgctacc catgtttctca tcttcagaa gaatcctgcg aacggagctt 3200
 cagtaatata tcgtggcctt cacatgtgag gaagctactt aacactagtt 3250
 actctcacia tgaaggacct ggaatgaaaa atctgtgtct aaacaagtcc 3300
 tcttttagatt ttagtgcaaa tccagagcca gcgtcggttg cctcgagtaa 3350
 ttctttcatg ggtacccttg gaaaagctct caggagacct cacctagatg 3400
 cctattcaag ctttggacag ccatcagatt gtcagccaag agccttttat 3450
 ttgaaagctc attcttcccc agacttggac tctgggtcag aggaagatgg 3500
 gaaagaaagg acagattttc aggaagaaaa tcacatttgt acctttaaac 3550
 agactttaga aaactacagg actccaaatt ttcagtctta tgacttggac 3600
 acatagactg aatgagacca aaggaaaagc ttaacatact acctcaagtg 3650
 aacttttatt taaaagagag agaatcttat gttttttaaa tggagttatg 3700
 aattttaaaa ggataaaaat gctttattta tacagatgaa ccaaaattac 3750
 aaaaagttat gaaaattttt atactgggaa tgatgctcat ataagaatac 3800
 ctttttaaac ttttttttaa ctttgtttta tgcaaaaaag tatcttacgt 3850
 aaattaatga tataaatcat gattattttta tgtattttta taatgccaga 3900
 tttcttttta tggaaaatga gttactaaag cattttaaat aatacctgcc 3950
 ttgtaccatt ttttaaatag aagttacttc attatatatt gcacattata 4000
 ttttaataaaa tgtgtcaatt tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4050
 aaa 4053

<210> 294
 <211> 1119
 <212> PRT
 <213> Homo Sapien

<400> 294
 Met Ser Ala Pro Ser Leu Arg Ala Arg Ala Gly Leu Gly Leu
 1 5 10 15
 Leu Leu Cys Ala Val Leu Gly Arg Ala Gly Arg Ser Asp Ser Gly
 20 25 30
 Gly Arg Gly Glu Leu Gly Gln Pro Ser Gly Val Ala Ala Glu Arg

					35						40						45
Pro	Cys	Pro	Thr	Thr	Cys	Arg	Cys	Leu	Gly	Asp	Leu	Leu	Asp	Cys			
				50					55					60			
Ser	Arg	Lys	Arg	Leu	Ala	Arg	Leu	Pro	Glu	Pro	Leu	Pro	Ser	Trp			
				65					70					75			
Val	Ala	Arg	Leu	Asp	Leu	Ser	His	Asn	Arg	Leu	Ser	Phe	Ile	Lys			
				80					85					90			
Ala	Ser	Ser	Met	Ser	His	Leu	Gln	Ser	Leu	Arg	Glu	Val	Lys	Leu			
				95					100					105			
Asn	Asn	Asn	Glu	Leu	Glu	Thr	Ile	Pro	Asn	Leu	Gly	Pro	Val	Ser			
				110					115					120			
Ala	Asn	Ile	Thr	Leu	Leu	Ser	Leu	Ala	Gly	Asn	Arg	Ile	Val	Glu			
				125					130					135			
Ile	Leu	Pro	Glu	His	Leu	Lys	Glu	Phe	Gln	Ser	Leu	Glu	Thr	Leu			
				140					145					150			
Asp	Leu	Ser	Ser	Asn	Asn	Ile	Ser	Glu	Leu	Gln	Thr	Ala	Phe	Pro			
				155					160					165			
Ala	Leu	Gln	Leu	Lys	Tyr	Leu	Tyr	Leu	Asn	Ser	Asn	Arg	Val	Thr			
				170					175					180			
Ser	Met	Glu	Pro	Gly	Tyr	Phe	Asp	Asn	Leu	Ala	Asn	Thr	Leu	Leu			
				185					190					195			
Val	Leu	Lys	Leu	Asn	Arg	Asn	Arg	Ile	Ser	Ala	Ile	Pro	Pro	Lys			
				200					205					210			
Met	Phe	Lys	Leu	Pro	Gln	Leu	Gln	His	Leu	Glu	Leu	Asn	Arg	Asn			
				215					220					225			
Lys	Ile	Lys	Asn	Val	Asp	Gly	Leu	Thr	Phe	Gln	Gly	Leu	Gly	Ala			
				230					235					240			
Leu	Lys	Ser	Leu	Lys	Met	Gln	Arg	Asn	Gly	Val	Thr	Lys	Leu	Met			
				245					250					255			
Asp	Gly	Ala	Phe	Trp	Gly	Leu	Ser	Asn	Met	Glu	Ile	Leu	Gln	Leu			
				260					265					270			
Asp	His	Asn	Asn	Leu	Thr	Glu	Ile	Thr	Lys	Gly	Trp	Leu	Tyr	Gly			
				275					280					285			
Leu	Leu	Met	Leu	Gln	Glu	Leu	His	Leu	Ser	Gln	Asn	Ala	Ile	Asn			
				290					295					300			
Arg	Ile	Ser	Pro	Asp	Ala	Trp	Glu	Phe	Cys	Gln	Lys	Leu	Ser	Glu			
				305					310					315			
Leu	Asp	Leu	Thr	Phe	Asn	His	Leu	Ser	Arg	Leu	Asp	Asp	Ser	Ser			

320	325	330
Phe Leu Gly Leu Ser Leu Leu Asn Thr	Leu His Ile Gly Asn Asn	
335	340	345
Arg Val Ser Tyr Ile Ala Asp Cys Ala	Phe Arg Gly Leu Ser Ser	
350	355	360
Leu Lys Thr Leu Asp Leu Lys Asn Asn	Glu Ile Ser Trp Thr Ile	
365	370	375
Glu Asp Met Asn Gly Ala Phe Ser Gly	Leu Asp Lys Leu Arg Arg	
380	385	390
Leu Ile Leu Gln Gly Asn Arg Ile Arg	Ser Ile Thr Lys Lys Ala	
395	400	405
Phe Thr Gly Leu Asp Ala Leu Glu His	Leu Asp Leu Ser Asp Asn	
410	415	420
Ala Ile Met Ser Leu Gln Gly Asn Ala	Phe Ser Gln Met Lys Lys	
425	430	435
Leu Gln Gln Leu His Leu Asn Thr Ser	Ser Leu Leu Cys Asp Cys	
440	445	450
Gln Leu Lys Trp Leu Pro Gln Trp Val	Ala Glu Asn Asn Phe Gln	
455	460	465
Ser Phe Val Asn Ala Ser Cys Ala His	Pro Gln Leu Leu Lys Gly	
470	475	480
Arg Ser Ile Phe Ala Val Ser Pro Asp	Gly Phe Val Cys Asp Asp	
485	490	495
Phe Pro Lys Pro Gln Ile Thr Val Gln	Pro Glu Thr Gln Ser Ala	
500	505	510
Ile Lys Gly Ser Asn Leu Ser Phe Ile	Cys Ser Ala Ala Ser Ser	
515	520	525
Ser Asp Ser Pro Met Thr Phe Ala Trp	Lys Lys Asp Asn Glu Leu	
530	535	540
Leu His Asp Ala Glu Met Glu Asn Tyr	Ala His Leu Arg Ala Gln	
545	550	555
Gly Gly Glu Val Met Glu Tyr Thr Thr	Ile Leu Arg Leu Arg Glu	
560	565	570
Val Glu Phe Ala Ser Glu Gly Lys Tyr	Gln Cys Val Ile Ser Asn	
575	580	585
His Phe Gly Ser Ser Tyr Ser Val Lys	Ala Lys Leu Thr Val Asn	
590	595	600
Met Leu Pro Ser Phe Thr Lys Thr Pro	Met Asp Leu Thr Ile Arg	

605					610					615				
Ala	Gly	Ala	Met	Ala	Arg	Leu	Glu	Cys	Ala	Ala	Val	Gly	His	Pro
				620					625					630
Ala	Pro	Gln	Ile	Ala	Trp	Gln	Lys	Asp	Gly	Gly	Thr	Asp	Phe	Pro
				635					640					645
Ala	Ala	Arg	Glu	Arg	Arg	Met	His	Val	Met	Pro	Glu	Asp	Asp	Val
				650					655					660
Phe	Phe	Ile	Val	Asp	Val	Lys	Ile	Glu	Asp	Ile	Gly	Val	Tyr	Ser
				665					670					675
Cys	Thr	Ala	Gln	Asn	Ser	Ala	Gly	Ser	Ile	Ser	Ala	Asn	Ala	Thr
				680					685					690
Leu	Thr	Val	Leu	Glu	Thr	Pro	Ser	Phe	Leu	Arg	Pro	Leu	Leu	Asp
				695					700					705
Arg	Thr	Val	Thr	Lys	Gly	Glu	Thr	Ala	Val	Leu	Gln	Cys	Ile	Ala
				710					715					720
Gly	Gly	Ser	Pro	Pro	Pro	Lys	Leu	Asn	Trp	Thr	Lys	Asp	Asp	Ser
				725					730					735
Pro	Leu	Val	Val	Thr	Glu	Arg	His	Phe	Phe	Ala	Ala	Gly	Asn	Gln
				740					745					750
Leu	Leu	Ile	Ile	Val	Asp	Ser	Asp	Val	Ser	Asp	Ala	Gly	Lys	Tyr
				755					760					765
Thr	Cys	Glu	Met	Ser	Asn	Thr	Leu	Gly	Thr	Glu	Arg	Gly	Asn	Val
				770					775					780
Arg	Leu	Ser	Val	Ile	Pro	Thr	Pro	Thr	Cys	Asp	Ser	Pro	Gln	Met
				785					790					795
Thr	Ala	Pro	Ser	Leu	Asp	Asp	Asp	Gly	Trp	Ala	Thr	Val	Gly	Val
				800					805					810
Val	Ile	Ile	Ala	Val	Val	Cys	Cys	Val	Val	Gly	Thr	Ser	Leu	Val
				815					820					825
Trp	Val	Val	Ile	Ile	Tyr	His	Thr	Arg	Arg	Arg	Asn	Glu	Asp	Cys
				830					835					840
Ser	Ile	Thr	Asn	Thr	Asp	Glu	Thr	Asn	Leu	Pro	Ala	Asp	Ile	Pro
				845					850					855
Ser	Tyr	Leu	Ser	Ser	Gln	Gly	Thr	Leu	Ala	Asp	Arg	Gln	Asp	Gly
				860					865					870
Tyr	Val	Ser	Ser	Glu	Ser	Gly	Ser	His	His	Gln	Phe	Val	Thr	Ser
				875					880					885
Ser	Gly	Ala	Gly	Phe	Phe	Leu	Pro	Gln	His	Asp	Ser	Ser	Gly	Thr

890	895	900
Cys His Ile Asp Asn Ser Ser Glu Ala	Asp Val Glu Ala Ala	Thr
905	910	915
Asp Leu Phe Leu Cys Pro Phe Leu Gly	Ser Thr Gly Pro Met	Tyr
920	925	930
Leu Lys Gly Asn Val Tyr Gly Ser Asp	Pro Phe Glu Thr Tyr	His
935	940	945
Thr Gly Cys Ser Pro Asp Pro Arg Thr	Val Leu Met Asp His	Tyr
950	955	960
Glu Pro Ser Tyr Ile Lys Lys Lys Glu	Cys Tyr Pro Cys Ser	His
965	970	975
Pro Ser Glu Glu Ser Cys Glu Arg Ser	Phe Ser Asn Ile Ser	Trp
980	985	990
Pro Ser His Val Arg Lys Leu Leu Asn	Thr Ser Tyr Ser His	Asn
995	1000	1005
Glu Gly Pro Gly Met Lys Asn Leu Cys	Leu Asn Lys Ser Ser	Leu
1010	1015	1020
Asp Phe Ser Ala Asn Pro Glu Pro Ala	Ser Val Ala Ser Ser	Asn
1025	1030	1035
Ser Phe Met Gly Thr Phe Gly Lys Ala	Leu Arg Arg Pro His	Leu
1040	1045	1050
Asp Ala Tyr Ser Ser Phe Gly Gln Pro	Ser Asp Cys Gln Pro	Arg
1055	1060	1065
Ala Phe Tyr Leu Lys Ala His Ser Ser	Pro Asp Leu Asp Ser	Gly
1070	1075	1080
Ser Glu Glu Asp Gly Lys Glu Arg Thr	Asp Phe Gln Glu Glu	Asn
1085	1090	1095
His Ile Cys Thr Phe Lys Gln Thr Leu	Glu Asn Tyr Arg Thr	Pro
1100	1105	1110
Asn Phe Gln Ser Tyr Asp Leu Asp Thr		
1115		

<210> 295

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 295

ggaaccgaat ctcagcta 18

<210> 296
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 296
cctaaactga actggacca 19

<210> 297
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 297
ggctggagac actgaacct 19

<210> 298
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 298
acagctgcac agctcagaac agtg 24

<210> 299

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 299
cattcccagt ataaaaattt tc 22

<210> 300
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 300
gggtcttggt gaatgagg 18

<210> 301
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 301
gtgcctctcg gttaccacca atgg 24

<210> 302
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 302
gcggccactg ttggaccgaa ctgtaaccaa gggagaaaca gccgtcctac 50

<210> 303
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 303
gcctttgaca accttcagtc actagtgg 28

<210> 304
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 304
cccatgtgt ccatgactgt tccc 24

<210> 305
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 305
tactgcctca tgacctcttc actcccttgc atcatcttag agcgg 45

<210> 306

<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 306
actccaagga aatcggatcc gttc 24

<210> 307
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 307
ttagcagctg aggatgggca caac 24

<210> 308
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 308
actccaagga aatcggatcc gttc 24

<210> 309
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 309
gccttcactg gtttgatgc attggagcat ctagacctga gtgacaacgc 50

<210> 310
<211> 3296
<212> DNA
<213> Homo Sapien

<400> 310

caaaacttgc gtcgcggaga gcgcccagct tgacttgaat ggaaggagcc 50
cgagcccgcg gagcgcagct gagactgggg gagcgcgttc ggcctgtggg 100
gcgccgctcg gcgccggggc gcagcagga aggggaagct gtggtctgcc 150
ctgctccacg aggcgccact ggtgtgaacc gggagagccc ctgggtggtc 200

cogtccccta tccctccttt atatagaaac cttccacact gggaaggcag 250
cggcgaggca ggagggctca tggtagagcaa ggaggccggc tgatctgcag 300
gcgcacagca ttccgagttt acagattttt acagatacca aatggaaggc 350
gaggaggcag aacagcctgc ctggttccat cagccctggc gcccaggcgc 400
atctgactcg gcacccctg caggcaccat ggcccagagc cgggtgctgc 450
tgctcctgct gctgctgccg ccacagctgc acctgggacc tgtgcttgcc 500
gtgagggccc caggatttgg ccgaagtggc ggccacagcc tgagccccga 550
agagaacgaa tttgcggagg aggagccggt gctggtactg agccctgagg 600
agcccggggc tggcccagcc gcggtcagct gccccgaga ctgtgcctgt 650
tcccaggagg gcgtcgtgga ctgtggcggc attgacctgc gtgagttccc 700
gggggacctg cctgagcaca ccaaccacct atctctgcag aacaaccagc 750
tggaagagat ctacctgag gagctctccc ggctgcaccg gctggagaca 800
ctgaacctgc aaaacaaccg cctgacttcc cgagggtccc cagagaaggc 850
gtttgagcat ctgaccaacc tcaattacct gtacttggcc aataacaagc 900
tgaccttggc accccgcttc ctgccaaacg ccctgatcag tgtggacttt 950
gctgccaaact atctcaccaa gatctatggg ctcacctttg gccagaagcc 1000
aaacttgagg tctgtgtacc tgcacaacaa caagctggca gacgccgggc 1050
tgccggacaa catgttcaac ggctccagca acgtcgaggt cctcatcctg 1100
tccagcaact tctgcgccca cgtgcccaag cacctgccgc ctgccctgta 1150
caagctgcac ctcaagaaca acaagctgga gaagatcccc ccgggggcct 1200
tcagcgagct gagcagcctg cgcgagctat acctgcagaa caactacctg 1250
actgacgagg gcctggacaa cgagaccttc tggaagctct ccagcctgga 1300
gtacctggat ctgtccagca acaacctgtc tcgggtccca gctgggctgc 1350
cgcgagcct ggtgctgctg cacttggaga agaacgcat ccggagcgtg 1400
gacgcgaatg tgctgacccc catccgcagc ctggagtacc tgctgctgca 1450
cagcaaccag ctgcgggagc agggcatcca cccactggcc ttccagggcc 1500
tcaagcggtt gcacacggtg cacctgtaca acaacgcgct ggagcgcgtg 1550
cccagtggcc tgccctgccg cgtgcgcacc ctcatgatcc tgcacaacca 1600

gatcacaggc attggccgcg aagactttgc caccacctac ttcttgagg 1650
agctcaacct cagctacaac cgcataacca gccacagggt gcaccgcgac 1700
gccttcgcga agctgcgcct gctgcgctcg ctggacctgt cgggcaaccg 1750
gctgcacacg ctgccacctg ggctgcctcg aaatgtccat gtgctgaagg 1800
tcaagcgcaa tgagctggct gccttggcac gaggggcgct ggcgggcatg 1850
gctcagctgc gtgagctgta cctcaccagc aaccgactgc gcagccgagc 1900
cctgggcccc cgtgcctggg tggacctcgc ccattctgag ctgctggaca 1950
tcgccgggaa tcagctcaca gagatccccg aggggctccc cgagtcactt 2000
gagtacctgt acctgcagaa caacaagatt agtgcggtgc ccgccaatgc 2050
cttcgactcc acgccccacc tcaaggggat ctttctcagg tttacaagc 2100
tggctgtggg ctccgtggtg gacagtgcct tccggaggct gaagcacctg 2150
caggctcttg acattgaagg caacttagag tttggtgaca tttccaagga 2200
ccgtggccgc ttggggaagg aaaaggagga ggaggaagag gaggaggagg 2250
aggaagagga aacaagatag tgacaagggt atgcagatgt gacctaggat 2300
gatggaccgc cggactcttt tctgcagcac acgcctgtgt gctgtgagcc 2350
ccccactctg ccgtgctcac acagacacac ccagctgcac acatgaggca 2400
tcccacatga caggggctga cacagtctca tatccccacc cttcccacg 2450
gcgtgtccca cggccagaca catgcacaca catcacacc tcaaacacc 2500
agctcagcca cacacaacta ccctccaaac caccacagtc tctgtcacac 2550
ccccactacc gctgccacgc cctctgaatc atgcaggga gggctctgcc 2600
ctgccttggc acacacaggc acccattccc tccccctgct gacatgtgta 2650
tgcgatatga tacacaccac acacacacac atgcacaagt catgtgcgaa 2700
cagccctcca aagcctatgc cacagacagc tcttgcccca gccagaatca 2750
gccatagcag ctgcgcgtct gccctgtcca tctgtccgtc cgttccctgg 2800
agaagacaca agggatatca tgctctgtgg ccagggtcct gccaccctct 2850
ggaactcaca aaagctggct tttattcctt tccatccta tggggacagg 2900
agccttcagg actgctggcc tggcctggcc caccctgctc ctccagggtc 2950
tgggcagtca ctctgctaag agtccctccc tgccacgccc tggcaggaca 3000
caggcacttt tccaatgggc aagcccagtg gaggcaggat gggagagccc 3050

cctgggtgct gctggggcct tggggcagga gtgaagcaga ggtgatgggg 3100
ctgggctgag ccagggagga aggacccagc tgcacctagg agacaccttt 3150
gttcttcagg cctgtggggg aagttccggg tgcctttatt tttattctt 3200
ttctaaggaa aaaaatgata aaaatctcaa agctgatttt tcttggtata 3250
gaaaaactaa tataaaagca ttatccctat ccctgcaaaa aaaaaa 3296

<210> 311
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 311
gcattggccg cgagactttg cc 22

<210> 312
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 312
gcggccacgg tccttggaat tg 22

<210> 313
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 313
tgaggagct caacctcagc tacaaccgca tcaccagccc acagg 45

<210> 314
<211> 3003
<212> DNA
<213> Homo Sapien

<400> 314
gggagggggc tccgggcgcc gcgcagcaga cctgctccgg ccgcgcgcct 50
cgccgctgtc ctccgggagc ggcagcagta gcccgggcgg cgagggctgg 100
gggttctctg agactctcag agggggcgcc cccatcggcg cccaccaccc 150
caacctgttc ctgcgcgcc actgcgctgc gcccaggac ccgctgcca 200

acatggattt tctcctggcg ctggtgctgg tatectcgct ctacctgcag 250
gcggccgccc agttcgacgg gaggtggccc aggcaaatag tgtcatcgat 300
tggcctatgt cgttatggtg ggaggattga ctgctgctgg ggctgggctc 350
gccagtcttg gggacagtgt cagcctgtgt gcccaaccacg atgcaaacat 400
ggtgaatgta tcgggccaaa caagtgcaag tgtcatcctg gttatgctgg 450
aaaaacctgt aatcaagatc taaatgagtg tggcctgaag ccccgccct 500
gtaagcacag gtgcatgaac acttacggca gctacaagtg ctactgtctc 550
aacggatata tgctcatgcc ggatggttcc tgctcaagtg ccctgacctg 600
ctccatggca aactgtcagt atggctgtga tgttggttaa ggacaaatac 650
ggtgccagtg cccatcccct ggctgcacc tggctcctga tgggaggacc 700
tgtgtagatg ttgatgaatg tgctacagga agagcctcct gccctagatt 750
taggcaatgt gtcaacactt ttgggagcta catctgcaag tgtcataaag 800
gcttcgatct catgtatatt ggaggcaa atcaatgtca tgacatagac 850
gaatgctcac ttggtcagta tcagtgcagc agctttgctc gatgttataa 900
cgtacgtggg tcctacaagt gcaaatgtaa agaaggatac cagggatgatg 950
gactgacttg tgtgtatatc caaaagtta tgattgaacc ttcaggtcca 1000
attcatgtac caaagggaaa tgggtaccatt ttaaagggtg acacaggaaa 1050
taataattgg attcctgatg ttggaagtac ttggtggcct ccgaagacac 1100
catatattcc tcctatcatt accaacaggc ctacttctaa gccaacaaca 1150
agacctacac caagccaac accaattcct actccaccac caccaccacc 1200
cctgccaa ca gagctcagaa cacctctacc acctacaacc ccagaaaggc 1250
caaccaccgg actgacaact atagcaccag ctgccagtac acctccagga 1300
gggattacag ttgacaacag ggtacagaca gacctcaga aaccagagg 1350
agatgtgttc agtgttctgg tacacagttg taattttgac catggacttt 1400
gtggatggat caggagaaaa gacaatgact tgcaactggga accaatcagg 1450
gaccagcag gtggacaata tctgacagtg tcggcagcca aagccccagg 1500
gggaaaagct gcacgcttg tgctacctc cgccgcctc atgcattcag 1550
gggacctgtg cctgtcattc aggcacaagg tgacggggct gcactctggc 1600

acactccagg tgtttgtgag aaaacacggt gccacggag cagccctgtg 1650
gggaagaaat ggtggccatg gctggaggca aacacagatc accttgcgag 1700
gggctgacat caagagcgaa tcacaaagat gattaaaggg ttggaaaaaa 1750
agatctatga tggaaaatta aaggaactgg gattattgag cctggagaag 1800
agaagactga ggggcaaacc attgatgggt ttcaagtata tgaagggttg 1850
gcacagagag ggtggcgacc agctgttctc catatgcact aagaatagaa 1900
caagaggaaa ctggcttaga ctagagtata agggagcatt tcttggcagg 1950
ggccattggt agaatacttc ataaaaaag aagtgtgaaa atctcagtat 2000
ctctctctct ttctaaaaaa ttagataaaa atttgtctat ttaagatggt 2050
taaagatggt cttaccaag gaaaagtaac aaattataga atttcccaa 2100
agatgttttg atcctactag tagtatgcag tgaaaatctt tagaactaaa 2150
taatttggac aaggcttaat ttaggcattt ccctcttgac ctctaattgg 2200
agagggattg aaaggggaag agcccaccaa atgctgagct cactgaaata 2250
tctctccctt atggcaatcc tagcagtatt aaagaaaaaa ggaaactatt 2300
tattccaaat gagagtatga tggacagata ttttagtatc tcagtaatgt 2350
cctagtgtgg cggtggtttt caatgtttct tcatggtaaa ggtataagcc 2400
tttcatttgt tcaatggatg atgtttcaga tttttttttt ttttaagagat 2450
ccttcaagga acacagttca gagagatttt catcgggtgc attctctctg 2500
cttcgtgtgt gacaagttat cttggctgct gagaaagagt gccctgcccc 2550
acaccggcag acctttcctt cacctcatca gtatgattca gtttctctta 2600
tcaattggac tctcccagg tccacagaac agtaatat tttgaacaat 2650
aggtaacaata gaaggtcttc tgtcatttaa cctggtaaag gcagggctgg 2700
agggggaaaa taaatcatta agcctttgag taacggcaga atatatggct 2750
gtagatccat ttttaatggt tcatctcctt tatggtcata taactgcaca 2800
gctgaagatg aaaggggaaa ataaatgaaa attttacttt tcgatgccaa 2850
tgatacattg cactaaactg atggaagaag ttatccaaag tactgtataa 2900
catcttgttt attatttaat gttttctaaa ataaaaaatg ttagtggttt 2950
tccaatggc ctaataaaaa caattatttg taaataaaaa cactgttagt 3000
aat 3003

<210> 315
 <211> 509
 <212> PRT
 <213> Homo Sapien

<400> 315

Met	Asp	Phe	Leu	Leu	Ala	Leu	Val	Leu	Val	Ser	Ser	Leu	Tyr	Leu	1	5	10	15
Gln	Ala	Ala	Ala	Glu	Phe	Asp	Gly	Arg	Trp	Pro	Arg	Gln	Ile	Val	20	25	30	
Ser	Ser	Ile	Gly	Leu	Cys	Arg	Tyr	Gly	Gly	Arg	Ile	Asp	Cys	Cys	35	40	45	
Trp	Gly	Trp	Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Val	Cys	50	55	60	
Gln	Pro	Arg	Cys	Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	65	70	75	
Lys	Cys	His	Pro	Gly	Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Asp	Leu	80	85	90	
Asn	Glu	Cys	Gly	Leu	Lys	Pro	Arg	Pro	Cys	Lys	His	Arg	Cys	Met	95	100	105	
Asn	Thr	Tyr	Gly	Ser	Tyr	Lys	Cys	Tyr	Cys	Leu	Asn	Gly	Tyr	Met	110	115	120	
Leu	Met	Pro	Asp	Gly	Ser	Cys	Ser	Ser	Ala	Leu	Thr	Cys	Ser	Met	125	130	135	
Ala	Asn	Cys	Gln	Tyr	Gly	Cys	Asp	Val	Val	Lys	Gly	Gln	Ile	Arg	140	145	150	
Cys	Gln	Cys	Pro	Ser	Pro	Gly	Leu	His	Leu	Ala	Pro	Asp	Gly	Arg	155	160	165	
Thr	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	Gly	Arg	Ala	Ser	Cys	170	175	180	
Pro	Arg	Phe	Arg	Gln	Cys	Val	Asn	Thr	Phe	Gly	Ser	Tyr	Ile	Cys	185	190	195	
Lys	Cys	His	Lys	Gly	Phe	Asp	Leu	Met	Tyr	Ile	Gly	Gly	Lys	Tyr	200	205	210	
Gln	Cys	His	Asp	Ile	Asp	Glu	Cys	Ser	Leu	Gly	Gln	Tyr	Gln	Cys	215	220	225	
Ser	Ser	Phe	Ala	Arg	Cys	Tyr	Asn	Val	Arg	Gly	Ser	Tyr	Lys	Cys	230	235	240	
Lys	Cys	Lys	Glu	Gly	Tyr	Gln	Gly	Asp	Gly	Leu	Thr	Cys	Val	Tyr				

	245		250		255
Ile Pro Lys Val Met	Ile Glu Pro Ser Gly	Pro Ile His Val Pro			
260		265			270
Lys Gly Asn Gly Thr	Ile Leu Lys Gly Asp	Thr Gly Asn Asn Asn			
275		280			285
Trp Ile Pro Asp Val	Gly Ser Thr Trp Trp	Pro Pro Lys Thr Pro			
290		295			300
Tyr Ile Pro Pro Ile	Ile Thr Asn Arg Pro	Thr Ser Lys Pro Thr			
305		310			315
Thr Arg Pro Thr Pro	Lys Pro Thr Pro Ile	Pro Thr Pro Pro Pro			
320		325			330
Pro Pro Pro Leu Pro	Thr Glu Leu Arg Thr	Pro Leu Pro Pro Thr			
335		340			345
Thr Pro Glu Arg Pro	Thr Thr Gly Leu Thr	Thr Ile Ala Pro Ala			
350		355			360
Ala Ser Thr Pro Pro	Gly Gly Ile Thr Val	Asp Asn Arg Val Gln			
365		370			375
Thr Asp Pro Gln Lys	Pro Arg Gly Asp Val	Phe Ser Val Leu Val			
380		385			390
His Ser Cys Asn Phe	Asp His Gly Leu Cys	Gly Trp Ile Arg Glu			
395		400			405
Lys Asp Asn Asp Leu	His Trp Glu Pro Ile	Arg Asp Pro Ala Gly			
410		415			420
Gly Gln Tyr Leu Thr	Val Ser Ala Ala Lys	Ala Pro Gly Gly Lys			
425		430			435
Ala Ala Arg Leu Val	Leu Pro Leu Gly Arg	Leu Met His Ser Gly			
440		445			450
Asp Leu Cys Leu Ser	Phe Arg His Lys Val	Thr Gly Leu His Ser			
455		460			465
Gly Thr Leu Gln Val	Phe Val Arg Lys His	Gly Ala His Gly Ala			
470		475			480
Ala Leu Trp Gly Arg	Asn Gly Gly His Gly	Trp Arg Gln Thr Gln			
485		490			495
Ile Thr Leu Arg Gly	Ala Asp Ile Lys Ser	Glu Ser Gln Arg			
500		505			

<210> 316
 <211> 24
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 316

gatggttcct gctcaagtgc cctg 24

<210> 317

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 317

ttgcattgt aggaaccacg tacg 24

<210> 318

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 318

ctgatgggag gacctgtgta gatgttgatg aatgtgctac aggaagagcc 50

<210> 319

<211> 2110

<212> DNA

<213> Homo Sapien

<400> 319

cttctttgaa aaggattatc acctgatcag gttctctctg catttgcccc 50

tttagattgt gaaatgtggc tcaaggtctt cacaactttc ctttcctttg 100

caacagggtgc ttgctcgggg ctgaagggtga cagtgccatc acacactgtc 150

catggcggtca gaggtcaggc cctctaccta cccgtccact atggcttcca 200

cactccagca tcagacatcc agatcatatg gctatttgag agaccccaca 250

caatgccc aaatactactg ggctctgtga ataagtctgt ggttcctgac 300

ttggaatacc aacacaagtt caccatgatg ccaccaatg catctctgct 350

tatcaaccca ctgcagttcc ctgatgaagg caattacatc gtgaagggtca 400

acattcaggg aaatggaact ctatctgcc a gtcagaagat acaagtcacg 450

gttgatgatc ctgtcacaaa gccagtgggtg cagattcatc ctccctctgg 500

ggctgtggag tatgtgggga acatgaccct gacatgccat gtggaagggg 550

gcactcggct agcttaccaa tggctaaaaa atgggagacc tgtccacacc 600
agctccacct actccttttc tccccaaaac aatacccttc atattgctcc 650
agtaaccaag gaagacattg ggaattacag ctgcctgggtg aggaaccctg 700
tcagtgaaat ggaaagtgat atcattatgc ccatcatata ttatggacct 750
tatggacttc aagtgaattc tgataaaggg ctaaaagtag gggaagtgtt 800
tactgttgac cttggagagg ccatcctatt tgattgttct gctgattctc 850
atcccccaa cacctactcc tggattagga ggactgacaa tactacatat 900
atcattaagc atgggcctcg cttagaagtt gcactctgaga aagtagccca 950
gaagacaatg gactatgtgt gctgtgctta caacaacata accggcaggc 1000
aagatgaaac tcatttcaca gttatcatca cttccgtagg actggagaag 1050
cttgcacaga aaggaaaatc attgtcacct ttagcaagta taactggaat 1100
atcactattt ttgattatat ccatgtgtct tctcttccta tggaaaaaat 1150
atcaacccta caaagttata aaacagaaac tagaaggcag gccagaaaca 1200
gaatacagga aagctcaaac attttcaggc catgaagatg ctctggatga 1250
cttcggaata tatgaatttg ttgcttttcc agatgtttct ggtgtttcca 1300
ggattccaag caggtctgtt ccagcctctg attgtgtatc ggggcaagat 1350
ttgcacagta cagtgtatga agttattcag cacatccctg cccagcagca 1400
agaccatcca gagtgaactt tcatgggcta aacagtacat tcgagtgaaa 1450
ttctgaagaa acattttaag gaaaaacagt ggaaaagtat attaactctg 1500
aatcagtga gaaaccagga ccaacacctc ttactcatta ttcctttaca 1550
tgcagaatag aggcatttat gcaaattgaa ctgcaggttt ttcagcatat 1600
acacaatgtc ttgtgcaaca gaaaaacatg ttggggaaat attcctcagt 1650
ggagagtcgt tctcatgctg acggggagaa cgaaagtgc aggggtttcc 1700
tcataagttt tgtatgaaat atctctacaa acctcaatta gttctactct 1750
acactttcac tatcatcaac actgagacta tcctgtctca cctacaaatg 1800
tggaacttt acattgttcg atttttcagc agactttgtt ttattaaatt 1850
tttattagtg ttaagaatgc taaatttatg tttcaatttt atttccaaat 1900
ttctatcttg ttatttgtac aacaaagtaa taaggatggt tgtcacaaaa 1950

acaaaactat gccttctctt ttttttcaat caccagtagt atttttgaga 2000
agacttgga acacttaagg aaatgactat taaagtctta tttttatattt 2050
tttcaaggaa agatggattc aaataaatta ttctgttttt gcttttaaaaa 2100
aaaaaaaaaa 2110

<210> 320
<211> 450
<212> PRT
<213> Homo Sapien

<400> 320

Met	Trp	Leu	Lys	Val	Phe	Thr	Thr	Phe	Leu	Ser	Phe	Ala	Thr	Gly	1	5	10	15
Ala	Cys	Ser	Gly	Leu	Lys	Val	Thr	Val	Pro	Ser	His	Thr	Val	His	20	25	30	
Gly	Val	Arg	Gly	Gln	Ala	Leu	Tyr	Leu	Pro	Val	His	Tyr	Gly	Phe	35	40	45	
His	Thr	Pro	Ala	Ser	Asp	Ile	Gln	Ile	Ile	Trp	Leu	Phe	Glu	Arg	50	55	60	
Pro	His	Thr	Met	Pro	Lys	Tyr	Leu	Leu	Gly	Ser	Val	Asn	Lys	Ser	65	70	75	
Val	Val	Pro	Asp	Leu	Glu	Tyr	Gln	His	Lys	Phe	Thr	Met	Met	Pro	80	85	90	
Pro	Asn	Ala	Ser	Leu	Leu	Ile	Asn	Pro	Leu	Gln	Phe	Pro	Asp	Glu	95	100	105	
Gly	Asn	Tyr	Ile	Val	Lys	Val	Asn	Ile	Gln	Gly	Asn	Gly	Thr	Leu	110	115	120	
Ser	Ala	Ser	Gln	Lys	Ile	Gln	Val	Thr	Val	Asp	Asp	Pro	Val	Thr	125	130	135	
Lys	Pro	Val	Val	Gln	Ile	His	Pro	Pro	Ser	Gly	Ala	Val	Glu	Tyr	140	145	150	
Val	Gly	Asn	Met	Thr	Leu	Thr	Cys	His	Val	Glu	Gly	Gly	Thr	Arg	155	160	165	
Leu	Ala	Tyr	Gln	Trp	Leu	Lys	Asn	Gly	Arg	Pro	Val	His	Thr	Ser	170	175	180	
Ser	Thr	Tyr	Ser	Phe	Ser	Pro	Gln	Asn	Asn	Thr	Leu	His	Ile	Ala	185	190	195	
Pro	Val	Thr	Lys	Glu	Asp	Ile	Gly	Asn	Tyr	Ser	Cys	Leu	Val	Arg	200	205	210	
Asn	Pro	Val	Ser	Glu	Met	Glu	Ser	Asp	Ile	Ile	Met	Pro	Ile	Ile				

215					220					225				
Tyr	Tyr	Gly	Pro	Tyr	Gly	Leu	Gln	Val	Asn	Ser	Asp	Lys	Gly	Leu
				230					235					240
Lys	Val	Gly	Glu	Val	Phe	Thr	Val	Asp	Leu	Gly	Glu	Ala	Ile	Leu
				245					250					255
Phe	Asp	Cys	Ser	Ala	Asp	Ser	His	Pro	Pro	Asn	Thr	Tyr	Ser	Trp
				260					265					270
Ile	Arg	Arg	Thr	Asp	Asn	Thr	Thr	Tyr	Ile	Ile	Lys	His	Gly	Pro
				275					280					285
Arg	Leu	Glu	Val	Ala	Ser	Glu	Lys	Val	Ala	Gln	Lys	Thr	Met	Asp
				290					295					300
Tyr	Val	Cys	Cys	Ala	Tyr	Asn	Asn	Ile	Thr	Gly	Arg	Gln	Asp	Glu
				305					310					315
Thr	His	Phe	Thr	Val	Ile	Ile	Thr	Ser	Val	Gly	Leu	Glu	Lys	Leu
				320					325					330
Ala	Gln	Lys	Gly	Lys	Ser	Leu	Ser	Pro	Leu	Ala	Ser	Ile	Thr	Gly
				335					340					345
Ile	Ser	Leu	Phe	Leu	Ile	Ile	Ser	Met	Cys	Leu	Leu	Phe	Leu	Trp
				350					355					360
Lys	Lys	Tyr	Gln	Pro	Tyr	Lys	Val	Ile	Lys	Gln	Lys	Leu	Glu	Gly
				365					370					375
Arg	Pro	Glu	Thr	Glu	Tyr	Arg	Lys	Ala	Gln	Thr	Phe	Ser	Gly	His
				380					385					390
Glu	Asp	Ala	Leu	Asp	Asp	Phe	Gly	Ile	Tyr	Glu	Phe	Val	Ala	Phe
				395					400					405
Pro	Asp	Val	Ser	Gly	Val	Ser	Arg	Ile	Pro	Ser	Arg	Ser	Val	Pro
				410					415					420
Ala	Ser	Asp	Cys	Val	Ser	Gly	Gln	Asp	Leu	His	Ser	Thr	Val	Tyr
				425					430					435
Glu	Val	Ile	Gln	His	Ile	Pro	Ala	Gln	Gln	Gln	Asp	His	Pro	Glu
				440					445					450

<210> 321

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 321

gatcctgtca caaagccagt ggtgc 25

<210> 322

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 322

cactgacagg gttcctcacc cagg 24

<210> 323

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 323

ctccctctgg gctgtggagt atgtggggaa catgaccctg acatg 45

<210> 324

<211> 2397

<212> DNA

<213> Homo Sapien

<400> 324

gcaagcggcg aaatggcgcc ctccgggagt cttgcagttc ccctggcagt 50
cctggtgctg ttgctttggg gtgctccctg gacgcacggg cggcggagca 100
acgttcgcgt catcacggac gagaactgga gagaactgct ggaaggagac 150
tggatgatag aattttatgc cccgtgggtgc cctgcttgtc aaaatcttca 200
accggaatgg gaaagttttg ctgaatgggg agaagatctt gaggttaata 250
ttgcgaaagt agatgtcaca gacgagccag gactgagtgg acggtttatc 300
ataactgctc ttcctactat ttatcattgt aaagatggtg aatttaggcg 350
ctatcagggg ccaaggacta agaaggactt cataaacttt ataagtgata 400
aagagtggaa gagtattgag cccgtttcat catggtttgg tccaggttct 450
gttctgatga gtagtatgtc agcactcttt cagctatcta tgtggatcag 500
gacgtgccat aactacttta ttgaagacct tggattgcca gtgtggggat 550
catatactgt ttttgcttta gcaactctgt tttccggact gttattagga 600
ctctgtatga tatttgtggc agattgcctt tgtccttcaa aaaggcgcag 650
accacagcca taccataacc cttcaaaaaa attattatca gaatctgcac 700

aacctttgaa aaaagtggag gaggaacaag aggcggatga agaagatggt 750
tcagaagaag aagctgaaag taaagaagga acaaacaag actttccaca 800
gaatgccata agacaacgct ctctgggtcc atcattggcc acagataaat 850
cctagttaaa ttttatagtt atcttaatat tatgattttg ataaaaacag 900
aagattgac attttgtttg gtttgaagt aactgtgact tttttgaata 950
ttgcagggtt cagtctagat tgcattaaa ttgaagagtc tacattcaga 1000
acataaaagc actaggtata caagtttgaa atatgattta agcacagtat 1050
gatggtttaa atagttctct aatttttgaa aaatcgtgcc aagcaataag 1100
atztatgtat atttgtttta taataaccta tttcaagtct gagttttgaa 1150
aatttacatt tcccaagtat tgcattattg aggtatttaa gaagattatt 1200
ttagagaaaa atatttctca tttgatataa tttttctctg tttcactgtg 1250
tgaaaaaag aagatatttc ccataaatgg gaagtttgcc cattgtctca 1300
agaaatgtgt atttcagtga caatttcgtg gtcttttttag aggtatattc 1350
caaaatttcc ttgtattttt aggttatgca actaataaaa actaccttac 1400
attaattaat tacagttttc tacacatggt aatacaggat atgctactga 1450
tttaggaagt ttttaagttc atggatttct cttgattcca acaaagtttg 1500
attttctctt gtatttttct tacttactat gggttacatt ttttattttt 1550
caaattggat gataatttct tggaacatt ttttatgttt tagtaaacag 1600
tatttttttg ttgtttcaaa ctgaagtta ctgagagatc catcaaattg 1650
aacaatctgt tgtaatttaa aattttggcc acttttttca gattttacat 1700
cattcttgct gaacttcaac ttgaaattgt ttttttttc tttttggatg 1750
tgaaggtgaa cattcctgat tttgtctga tgtgaaaaag ccttggtatt 1800
ttacattttg aaaattcaaa gaagcttaat ataaaagttt gcattctact 1850
caggaaaaag catcttcttg tatatgtctt aaatgtattt ttgtcctcat 1900
atacagaaag ttcttaattg attttacagt ctgtaatgct tgatgtttta 1950
aaataataac atttttatat tttttaaaag acaaacttca tattatcctg 2000
tgttctttcc tgactggtaa tattgtgtgg gatttcacag gtaaaagtca 2050
gtaggatgga acattttagt gtatttttac tccttaaaga gctagaatac 2100

Gly Leu Cys Met Ile Phe Val Ala Asp Cys Leu Cys Pro Ser Lys
200 205 210

Arg Arg Arg Pro Gln Pro Tyr Pro Tyr Pro Ser Lys Lys Leu Leu
215 220 225

Ser Glu Ser Ala Gln Pro Leu Lys Lys Val Glu Glu Glu Gln Glu
230 235 240

Ala Asp Glu Glu Asp Val Ser Glu Glu Glu Ala Glu Ser Lys Glu
245 250 255

Gly Thr Asn Lys Asp Phe Pro Gln Asn Ala Ile Arg Gln Arg Ser
260 265 270

Leu Gly Pro Ser Leu Ala Thr Asp Lys Ser
275 280

<210> 326

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 326

tgaggtgggc aagcggcgaa atg 23

<210> 327

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 327

tatgtggatc aggacgtgcc 20

<210> 328

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 328

tgcagggttc agtctagatt g 21

<210> 329

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 329

ttgaaggaca aaggcaatct gccac 25

<210> 330

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 330

ggagtcttg gc agttcccctg gcagtcctgg tgctgttgct ttggg 45

<210> 331

<211> 2168

<212> DNA

<213> Homo Sapien

<400> 331

gcgagtgtcc agctgcggag acccgtgata attcgttaac taattcaaca 50

aacgggaccc ttctgtgtgc cagaaaccgc aagcagttgc taaccagtg 100

ggacaggcgg attggaagag cgggaaggtc ctggcccaga gcagtgtgac 150

acttccctct gtgaccatga aactctgggt gtctgcattg ctgatggcct 200

ggtttggtgt cctgagctgt gtgcaggccg aattcttcac ctctattggg 250

cacatgactg acctgattta tgcagagaaa gagctggtgc agtctctgaa 300

agagtacatc cttgtggagg aagccaagct ttccaagatt aagagctggg 350

ccaacaaaat ggaagccttg actagcaagt cagctgctga tgctgagggc 400

tacctggctc accctgtgaa tgcctacaaa ctggtgaagc ggctaaacac 450

agactggcct gcgctggagg accttgtcct gcaggactca gctgcagggt 500

ttatcgccaa cctctctgtg cagcggcagt tcttccccac tgatgaggac 550

gagataggag ctgccaaagc cctgatgaga cttcaggaca catacaggct 600

ggacccaggc acaatttcca gaggggaact tccaggaacc aagtaccagg 650

caatgctgag tgtggatgac tgctttggga tgggccgctc ggctacaat 700

gaaggggact attatcatc ggtgttgtgg atggagcagg tgctaaagca 750

gcttgatgcc ggggaggagg ccaccacaac caagtcacag gtgctggact 800

acctcagcta tgctgtcttc cagttgggtg atctgcaccg tgccctggag 850

ctcaccgcc gcctgctctc ccttgaccca agccacgaac gagctggagg 900
gaatctgcgg tactttgagc agttattgga ggaagagaga gaaaaaacgt 950
taacaaatca gacagaagct gagctagcaa cccagaaggg catctatgag 1000
aggcctgtgg actacctgcc tgagagggat gtttacgaga gcctctgtcg 1050
tggggaggggt gtcaaaactga caccocgtag acagaagagg cttttctgta 1100
ggtaccacca tggcaacagg gcccacagc tgctcattgc ccccttcaaa 1150
gaggaggacg agtgggacag cccgcacatc gtcaggtact acgatgtcat 1200
gtctgatgag gaaatcgaga ggatcaagga gatcgcaaaa cctaaacttg 1250
cacgagccac cgttcgtgat cccaagacag gagtcctcac tgtcgccagc 1300
taccgggttt ccaaaagctc ctggctagag gaagatgatg accctgttgt 1350
ggcccagata aatcgctcga tgcagcatat cacagggtta acagtaaaga 1400
ctgcagaatt gttacagggt gcaaattatg gagtgggagg acagtatgaa 1450
ccgcacttcg acttctctag gcgacctttt gacagcggcc tcaaaacaga 1500
ggggaatagg ttagcgacgt ttcttaacta catgagtgat gtagaagctg 1550
gtggtgccac cgtcttcctt gatctggggg ctgcaatttg gcctaagaag 1600
ggtacagctg tgttctggta caacctcttg cggagcgggg aagggtgacta 1650
ccgaacaaga catgctgcct gccctgtgct tgtgggctgc aagtgggtct 1700
ccaataagtg gttccatgaa cgaggacagg agttcttgag accttgtgga 1750
tcaacagaag ttgactgaca tccttttctg tccttccctt tcctggtcct 1800
tcagcccatg tcaacgtgac agacaccttt gtatgttcct ttgtatgttc 1850
ctatcaggct gatttttgga gaaatgaatg tttgtctgga gcagagggag 1900
accatactag ggcgactcct gtgtgactga agtcccagcc cttccattca 1950
gcctgtgcca tccctggccc caaggctagg atcaaagtgg ctgcagcaga 2000
gttagctgtc tagcgcttag caaggctcct ttgtacctca ggtgttttag 2050
gtgtgagatg tttcagtga ccaaagttct gataccttgt ttacatgttt 2100
gtttttatgg catttctatc tattgtggct ttaccaaaaa ataaaatgtc 2150
cctaccagaa aaaaaaaaa 2168

<210> 332

<211> 533

<212> PRT

<213> Homo Sapien

<400> 332

Met	Lys	Leu	Trp	Val	Ser	Ala	Leu	Leu	Met	Ala	Trp	Phe	Gly	Val	
1				5					10					15	
Leu	Ser	Cys	Val	Gln	Ala	Glu	Phe	Phe	Thr	Ser	Ile	Gly	His	Met	
				20					25					30	
Thr	Asp	Leu	Ile	Tyr	Ala	Glu	Lys	Glu	Leu	Val	Gln	Ser	Leu	Lys	
				35					40					45	
Glu	Tyr	Ile	Leu	Val	Glu	Glu	Ala	Lys	Leu	Ser	Lys	Ile	Lys	Ser	
				50					55					60	
Trp	Ala	Asn	Lys	Met	Glu	Ala	Leu	Thr	Ser	Lys	Ser	Ala	Ala	Asp	
				65					70					75	
Ala	Glu	Gly	Tyr	Leu	Ala	His	Pro	Val	Asn	Ala	Tyr	Lys	Leu	Val	
				80					85					90	
Lys	Arg	Leu	Asn	Thr	Asp	Trp	Pro	Ala	Leu	Glu	Asp	Leu	Val	Leu	
				95					100					105	
Gln	Asp	Ser	Ala	Ala	Gly	Phe	Ile	Ala	Asn	Leu	Ser	Val	Gln	Arg	
				110					115					120	
Gln	Phe	Phe	Pro	Thr	Asp	Glu	Asp	Glu	Ile	Gly	Ala	Ala	Lys	Ala	
				125					130					135	
Leu	Met	Arg	Leu	Gln	Asp	Thr	Tyr	Arg	Leu	Asp	Pro	Gly	Thr	Ile	
				140					145					150	
Ser	Arg	Gly	Glu	Leu	Pro	Gly	Thr	Lys	Tyr	Gln	Ala	Met	Leu	Ser	
				155					160					165	
Val	Asp	Asp	Cys	Phe	Gly	Met	Gly	Arg	Ser	Ala	Tyr	Asn	Glu	Gly	
				170					175					180	
Asp	Tyr	Tyr	His	Thr	Val	Leu	Trp	Met	Glu	Gln	Val	Leu	Lys	Gln	
				185					190					195	
Leu	Asp	Ala	Gly	Glu	Glu	Ala	Thr	Thr	Thr	Lys	Ser	Gln	Val	Leu	
				200					205					210	
Asp	Tyr	Leu	Ser	Tyr	Ala	Val	Phe	Gln	Leu	Gly	Asp	Leu	His	Arg	
				215					220					225	
Ala	Leu	Glu	Leu	Thr	Arg	Arg	Leu	Leu	Ser	Leu	Asp	Pro	Ser	His	
				230					235					240	
Glu	Arg	Ala	Gly	Gly	Asn	Leu	Arg	Tyr	Phe	Glu	Gln	Leu	Leu	Glu	
				245					250					255	
Glu	Glu	Arg	Glu	Lys	Thr	Leu	Thr	Asn	Gln	Thr	Glu	Ala	Glu	Leu	
				260					265					270	

Ala Thr Pro Glu Gly Ile Tyr Glu Arg Pro Val Asp Tyr Leu Pro	275	280	285
Glu Arg Asp Val Tyr Glu Ser Leu Cys Arg Gly Glu Gly Val Lys	290	295	300
Leu Thr Pro Arg Arg Gln Lys Arg Leu Phe Cys Arg Tyr His His	305	310	315
Gly Asn Arg Ala Pro Gln Leu Leu Ile Ala Pro Phe Lys Glu Glu	320	325	330
Asp Glu Trp Asp Ser Pro His Ile Val Arg Tyr Tyr Asp Val Met	335	340	345
Ser Asp Glu Glu Ile Glu Arg Ile Lys Glu Ile Ala Lys Pro Lys	350	355	360
Leu Ala Arg Ala Thr Val Arg Asp Pro Lys Thr Gly Val Leu Thr	365	370	375
Val Ala Ser Tyr Arg Val Ser Lys Ser Ser Trp Leu Glu Glu Asp	380	385	390
Asp Asp Pro Val Val Ala Arg Val Asn Arg Arg Met Gln His Ile	395	400	405
Thr Gly Leu Thr Val Lys Thr Ala Glu Leu Leu Gln Val Ala Asn	410	415	420
Tyr Gly Val Gly Gly Gln Tyr Glu Pro His Phe Asp Phe Ser Arg	425	430	435
Arg Pro Phe Asp Ser Gly Leu Lys Thr Glu Gly Asn Arg Leu Ala	440	445	450
Thr Phe Leu Asn Tyr Met Ser Asp Val Glu Ala Gly Gly Ala Thr	455	460	465
Val Phe Pro Asp Leu Gly Ala Ala Ile Trp Pro Lys Lys Gly Thr	470	475	480
Ala Val Phe Trp Tyr Asn Leu Leu Arg Ser Gly Glu Gly Asp Tyr	485	490	495
Arg Thr Arg His Ala Ala Cys Pro Val Leu Val Gly Cys Lys Trp	500	505	510
Val Ser Asn Lys Trp Phe His Glu Arg Gly Gln Glu Phe Leu Arg	515	520	525
Pro Cys Gly Ser Thr Glu Val Asp	530		

<210> 333

<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 333
ccaggcacaa tttccaga 18

<210> 334
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 334
ggacccttct gtgtgccag 19

<210> 335
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 335
ggtctcaaga actcctgtc 19

<210> 336
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 336
acactcagca ttgcctggta cttg 24

<210> 337
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 337
gggcacatga ctgacctgat ttatgcagag aaagagctgg tgcag 45

<210> 338
<211> 2789

<212> DNA

<213> Homo Sapien

<400> 338

```
gcagtattga gttttacttc ctctctcttt tagtggaaga cagaccataa 50
tcccagtgtg agtgaaattg attgtttcat ttattaccgt tttggctggg 100
ggttagttcc gacaccttca cagttgaaga gcaggcagaa ggagttgtga 150
agacaggaca atcttcttgg ggatgctggg cctggaagcc agcgggcctt 200
gctctgtctt tggcctcatt gacccaggt tctctggta aaactgaaag 250
cctactactg gcctggtgcc catcaatcca ttgatccttg aggctgtgcc 300
cctggggcac ccacctggca gggcctacca ccatgcgact gagctccctg 350
ttggctctgc tgcggccagc gcttcccctc atcttagggc tgtctctggg 400
gtgcagcctg agcctcctgc gggtttctg gatccagggg gagggagaag 450
atccctgtgt cgaggctgta ggggagcgag gagggccaca gaatccagat 500
tcgagagctc ggctagacca aagtgatgaa gacttcaaac cccggattgt 550
cccctactac agggaccca acaagcccta caagaagggtg ctcaggactc 600
ggtacatcca gacagagctg ggctcccgtg agcggttgct ggtggctgtc 650
ctgacctccc gagctacact gtccactttg gccgtggctg tgaaccgtac 700
ggtggcccat cacttccctc ggttactcta ctactggg cagcgggggg 750
cccgggctcc agcagggatg cagggtgtgt ctcatgggga tgagcggccc 800
gcctggctca tgtcagagac cctgcgccac cttcacacac actttggggc 850
cgactacgac tggttcttca tcatgcagga tgacacatat gtgcaggccc 900
ccgcctggc agcccttgct ggccacctca gcatcaacca agacctgtac 950
ttaggccggg cagaggagtt cattggcgca ggcgagcagg cccggtactg 1000
tcatgggggc tttggctacc tgttgtcacg gagtctcctg ctctgtctgc 1050
ggccacatct ggatggctgc cgaggagaca ttctcagtgc ccgtcctgac 1100
gagtggcttg gacgtgcct cattgactct ctgggcgtcg gctgtgtctc 1150
acagcaccag gggcagcagt atcgctcatt tgaactggcc aaaaataggg 1200
accctgagaa ggaaggagc tcggctttcc tgagtgcctt cgcctgtcac 1250
cctgtctccg aaggtaccct catgtaccgg ctccacaaac gcttcagcgc 1300
tctggagttg gagcgggctt acagtgaat agaacaactg caggctcaga 1350
```

tccggaacct gaccgtgctg acccccgaag gggaggcagg gctgagctgg 1400
cccgttgggc tccctgctcc ttccacacca cactctcgct ttgaggtgct 1450
gggctgggac tacttcacag agcagcacac cttctcctgt gcagatgggg 1500
ctcccaagtg ccactacag ggggctagca gggcggacgt gggatgatgcg 1550
ttggagactg ccctggagca gctcaatcgg cgctatcagc cccgcctgcg 1600
cttcagaag cagcgactgc tcaacggcta tcggcgcttc gaccagcac 1650
ggggcatgga gtacacctg gacctgctgt tggaatgtgt gacacagcgt 1700
gggcaccggc gggccctggc tcgcagggtc agcctgctgc ggccactgag 1750
ccgggtggaa atcctaccta tgccctatgt cactgaggcc acccgagtgc 1800
agctggtgct gccactcctg gtggctgaag ctgctgcagc cccggctttc 1850
ctcgaggcgt ttgcagccaa tgtcctggag ccacgagaac atgcattgct 1900
caccctgttg ctggtctacg ggccacgaga aggtggccgt ggagctccag 1950
accatttct tgggggtgaag gctgcagcag cggagttaga gcgacggtac 2000
cctgggacga ggctggcctg gctcgctgtg cgagcagagg ccccttccca 2050
ggtgcgactc atggacgtgg tctcgaagaa gcaccctgtg gacactctct 2100
tcttccttac caccgtgtgg acaaggcctg ggcccgaagt cctcaaccgc 2150
tgtcgcatga atgccatctc tggctggcag gccttctttc cagtccattt 2200
ccaggagttc aatcctgccc tgtcaccaca gagatcacc ccagggcccc 2250
cgggggctgg ccctgacccc cctcccctc ctggtgctga cccctcccgg 2300
ggggctccta taggggggag atttgaccgg caggcttctg cggagggtg 2350
cttctacaac gctgactacc tggcgccccg agcccggtg gcaggtgaac 2400
tggcaggcca ggaagaggag gaagccctgg aggggctgga ggtgatggat 2450
gttttctctc ggttctcagg gctccacctc tttcgggccg tagagccagg 2500
gctggtgcag aagttctccc tgcgagactg cagcccacgg ctgagtgaag 2550
aactctacca ccgctgccgc ctcagcaacc tggaggggct agggggccgt 2600
gccagctgg ctatggctct ctttgagcag gagcaggcca atagcactta 2650
gccgcctgg gggccctaac ctcattacct ttctttgtc tgccctagcc 2700
ccaggaagg caaggcaaga tggtgacag atagagaatt gttgctgtat 2750
tttttaata tgaaaatgtt attaaacatg tcttctgcc 2789

<210> 339
 <211> 772
 <212> PRT
 <213> Homo Sapien

<400> 339

Met	Arg	Leu	Ser	Ser	Leu	Leu	Ala	Leu	Leu	Arg	Pro	Ala	Leu	Pro	1	5	10	15
Leu	Ile	Leu	Gly	Leu	Ser	Leu	Gly	Cys	Ser	Leu	Ser	Leu	Leu	Arg	20	25	30	
Val	Ser	Trp	Ile	Gln	Gly	Glu	Gly	Glu	Asp	Pro	Cys	Val	Glu	Ala	35	40	45	
Val	Gly	Glu	Arg	Gly	Gly	Pro	Gln	Asn	Pro	Asp	Ser	Arg	Ala	Arg	50	55	60	
Leu	Asp	Gln	Ser	Asp	Glu	Asp	Phe	Lys	Pro	Arg	Ile	Val	Pro	Tyr	65	70	75	
Tyr	Arg	Asp	Pro	Asn	Lys	Pro	Tyr	Lys	Lys	Val	Leu	Arg	Thr	Arg	80	85	90	
Tyr	Ile	Gln	Thr	Glu	Leu	Gly	Ser	Arg	Glu	Arg	Leu	Leu	Val	Ala	95	100	105	
Val	Leu	Thr	Ser	Arg	Ala	Thr	Leu	Ser	Thr	Leu	Ala	Val	Ala	Val	110	115	120	
Asn	Arg	Thr	Val	Ala	His	His	Phe	Pro	Arg	Leu	Leu	Tyr	Phe	Thr	125	130	135	
Gly	Gln	Arg	Gly	Ala	Arg	Ala	Pro	Ala	Gly	Met	Gln	Val	Val	Ser	140	145	150	
His	Gly	Asp	Glu	Arg	Pro	Ala	Trp	Leu	Met	Ser	Glu	Thr	Leu	Arg	155	160	165	
His	Leu	His	Thr	His	Phe	Gly	Ala	Asp	Tyr	Asp	Trp	Phe	Phe	Ile	170	175	180	
Met	Gln	Asp	Asp	Thr	Tyr	Val	Gln	Ala	Pro	Arg	Leu	Ala	Ala	Leu	185	190	195	
Ala	Gly	His	Leu	Ser	Ile	Asn	Gln	Asp	Leu	Tyr	Leu	Gly	Arg	Ala	200	205	210	
Glu	Glu	Phe	Ile	Gly	Ala	Gly	Glu	Gln	Ala	Arg	Tyr	Cys	His	Gly	215	220	225	
Gly	Phe	Gly	Tyr	Leu	Leu	Ser	Arg	Ser	Leu	Leu	Leu	Arg	Leu	Arg	230	235	240	
Pro	His	Leu	Asp	Gly	Cys	Arg	Gly	Asp	Ile	Leu	Ser	Ala	Arg	Pro	245	250	255	

Asp	Glu	Trp	Leu	Gly	Arg	Cys	Leu	Ile	Asp	Ser	Leu	Gly	Val	Gly		260	265	270
Cys	Val	Ser	Gln	His	Gln	Gly	Gln	Gln	Tyr	Arg	Ser	Phe	Glu	Leu		275	280	285
Ala	Lys	Asn	Arg	Asp	Pro	Glu	Lys	Glu	Gly	Ser	Ser	Ala	Phe	Leu		290	295	300
Ser	Ala	Phe	Ala	Val	His	Pro	Val	Ser	Glu	Gly	Thr	Leu	Met	Tyr		305	310	315
Arg	Leu	His	Lys	Arg	Phe	Ser	Ala	Leu	Glu	Leu	Glu	Arg	Ala	Tyr		320	325	330
Ser	Glu	Ile	Glu	Gln	Leu	Gln	Ala	Gln	Ile	Arg	Asn	Leu	Thr	Val		335	340	345
Leu	Thr	Pro	Glu	Gly	Glu	Ala	Gly	Leu	Ser	Trp	Pro	Val	Gly	Leu		350	355	360
Pro	Ala	Pro	Phe	Thr	Pro	His	Ser	Arg	Phe	Glu	Val	Leu	Gly	Trp		365	370	375
Asp	Tyr	Phe	Thr	Glu	Gln	His	Thr	Phe	Ser	Cys	Ala	Asp	Gly	Ala		380	385	390
Pro	Lys	Cys	Pro	Leu	Gln	Gly	Ala	Ser	Arg	Ala	Asp	Val	Gly	Asp		395	400	405
Ala	Leu	Glu	Thr	Ala	Leu	Glu	Gln	Leu	Asn	Arg	Arg	Tyr	Gln	Pro		410	415	420
Arg	Leu	Arg	Phe	Gln	Lys	Gln	Arg	Leu	Leu	Asn	Gly	Tyr	Arg	Arg		425	430	435
Phe	Asp	Pro	Ala	Arg	Gly	Met	Glu	Tyr	Thr	Leu	Asp	Leu	Leu	Leu		440	445	450
Glu	Cys	Val	Thr	Gln	Arg	Gly	His	Arg	Arg	Ala	Leu	Ala	Arg	Arg		455	460	465
Val	Ser	Leu	Leu	Arg	Pro	Leu	Ser	Arg	Val	Glu	Ile	Leu	Pro	Met		470	475	480
Pro	Tyr	Val	Thr	Glu	Ala	Thr	Arg	Val	Gln	Leu	Val	Leu	Pro	Leu		485	490	495
Leu	Val	Ala	Glu	Ala	Ala	Ala	Ala	Pro	Ala	Phe	Leu	Glu	Ala	Phe		500	505	510
Ala	Ala	Asn	Val	Leu	Glu	Pro	Arg	Glu	His	Ala	Leu	Leu	Thr	Leu		515	520	525
Leu	Leu	Val	Tyr	Gly	Pro	Arg	Glu	Gly	Gly	Arg	Gly	Ala	Pro	Asp		530	535	540

Pro	Phe	Leu	Gly	Val	Lys	Ala	Ala	Ala	Ala	Glu	Leu	Glu	Arg	Arg		545	550	555
Tyr	Pro	Gly	Thr	Arg	Leu	Ala	Trp	Leu	Ala	Val	Arg	Ala	Glu	Ala		560	565	570
Pro	Ser	Gln	Val	Arg	Leu	Met	Asp	Val	Val	Ser	Lys	Lys	His	Pro		575	580	585
Val	Asp	Thr	Leu	Phe	Phe	Leu	Thr	Thr	Val	Trp	Thr	Arg	Pro	Gly		590	595	600
Pro	Glu	Val	Leu	Asn	Arg	Cys	Arg	Met	Asn	Ala	Ile	Ser	Gly	Trp		605	610	615
Gln	Ala	Phe	Phe	Pro	Val	His	Phe	Gln	Glu	Phe	Asn	Pro	Ala	Leu		620	625	630
Ser	Pro	Gln	Arg	Ser	Pro	Pro	Gly	Pro	Pro	Gly	Ala	Gly	Pro	Asp		635	640	645
Pro	Pro	Ser	Pro	Pro	Gly	Ala	Asp	Pro	Ser	Arg	Gly	Ala	Pro	Ile		650	655	660
Gly	Gly	Arg	Phe	Asp	Arg	Gln	Ala	Ser	Ala	Glu	Gly	Cys	Phe	Tyr		665	670	675
Asn	Ala	Asp	Tyr	Leu	Ala	Ala	Arg	Ala	Arg	Leu	Ala	Gly	Glu	Leu		680	685	690
Ala	Gly	Gln	Glu	Glu	Glu	Glu	Ala	Leu	Glu	Gly	Leu	Glu	Val	Met		695	700	705
Asp	Val	Phe	Leu	Arg	Phe	Ser	Gly	Leu	His	Leu	Phe	Arg	Ala	Val		710	715	720
Glu	Pro	Gly	Leu	Val	Gln	Lys	Phe	Ser	Leu	Arg	Asp	Cys	Ser	Pro		725	730	735
Arg	Leu	Ser	Glu	Glu	Leu	Tyr	His	Arg	Cys	Arg	Leu	Ser	Asn	Leu		740	745	750
Glu	Gly	Leu	Gly	Gly	Arg	Ala	Gln	Leu	Ala	Met	Ala	Leu	Phe	Glu		755	760	765
Gln	Glu	Gln	Ala	Asn	Ser	Thr										770		

<210> 340

<211> 1572

<212> DNA

<213> Homo Sapien

<400> 340

cggagtgggtg cgccaacgtg agaggaaacc cgtgcgcggc tgcgctttcc 50

tgtccccaag ccgttctaga cgcgggaaaa atgctttctg aaagcagctc 100
ctttttgaag ggtgtgatgc ttggaagcat tttctgtgct ttgatcacta 150
tgctaggaca cattaggatt ggtcatggaa atagaatgca ccaccatgag 200
catcatcacc tacaagctcc taacaaagaa gatatcttga aaatttcaga 250
ggatgagcgc atggagctca gtaagagctt tcgagtatac tgtattatcc 300
ttgtaaaacc caaagatgtg agtctttggg ctgcagtaaa ggagacttgg 350
accaaact gtgacaaagc agagtcttc agttctgaaa atgttaaagt 400
gtttgagtca attaatatgg acacaaatga catgtggtta atgatgagaa 450
aagcttaca atacgccttt gataagtata gagaccaata caactgggtc 500
ttccttgca cccactac gtttgctatc attgaaaacc taaagtattt 550
tttgttaaaa aaggatccat cacagccttt ctatctaggc cacactataa 600
aatctggaga ccttgaatat gtgggtatgg aaggaggaat tgtcttaagt 650
gtagaatcaa tgaaaagact taacagcctt ctcaatatcc cagaaaagt 700
tcctgaacag ggagggatga tttggaagat atctgaagat aaacagctag 750
cagtttgctt gaaatatgct ggagtatttg cagaaaatgc agaagatgct 800
gatggaaaag atgtatttaa taccaaact gttgggcttt ctattaaaga 850
ggcaatgact tatcaccca accaggtagt agaaggctgt tggtcagata 900
tggtgtttac ttttaatgga ctgactccaa atcagatgca tgtgatgatg 950
tatggggtat accgccttag ggcatttggg catattttca atgatgcatt 1000
ggttttctta cctccaaatg gttctgacaa tgactgagaa gtggtagaaa 1050
agcgtgaata tgatctttgt ataggacgtg tgttgcatt atttgtagta 1100
gtaactacat atccaatata gctgtatgtt tctttttctt ttctaatttg 1150
gtggcactgg tataaccaca cattaaagtc agtagtacat ttttaaata 1200
gggtggtttt tttctttaa acacatgaac attgtaaatg tggtggaaag 1250
aagtgtttta agaataataa ttttgcaaat aaactattaa taaatattat 1300
atgtgataaa ttctaaatta tgaacattag aaatctgtgg ggcacatatt 1350
tttctgatt ggtaaaaaa ttttaacagg tcttttagcgt tctaagatat 1400
gcaaatgata tctctagtgt tgaatttgtg attaaagtaa aacttttagc 1450
tgtgtgttcc cttacttct aatactgatt tatgttctaa gcctcccaa 1500

gttcgaatgg atttgccttc tcaaaatgta caactaagca actaaagaaa 1550

attaaagtga aagttgaaaa at 1572

<210> 341

<211> 318

<212> PRT

<213> Homo Sapien

<400> 341

Met	Leu	Ser	Glu	Ser	Ser	Ser	Phe	Leu	Lys	Gly	Val	Met	Leu	Gly
1				5					10					15

Ser	Ile	Phe	Cys	Ala	Leu	Ile	Thr	Met	Leu	Gly	His	Ile	Arg	Ile
				20					25					30

Gly	His	Gly	Asn	Arg	Met	His	His	His	Glu	His	His	His	Leu	Gln
				35					40					45

Ala	Pro	Asn	Lys	Glu	Asp	Ile	Leu	Lys	Ile	Ser	Glu	Asp	Glu	Arg
				50					55					60

Met	Glu	Leu	Ser	Lys	Ser	Phe	Arg	Val	Tyr	Cys	Ile	Ile	Leu	Val
				65					70					75

Lys	Pro	Lys	Asp	Val	Ser	Leu	Trp	Ala	Ala	Val	Lys	Glu	Thr	Trp
				80					85					90

Thr	Lys	His	Cys	Asp	Lys	Ala	Glu	Phe	Phe	Ser	Ser	Glu	Asn	Val
				95					100					105

Lys	Val	Phe	Glu	Ser	Ile	Asn	Met	Asp	Thr	Asn	Asp	Met	Trp	Leu
				110					115					120

Met	Met	Arg	Lys	Ala	Tyr	Lys	Tyr	Ala	Phe	Asp	Lys	Tyr	Arg	Asp
				125					130					135

Gln	Tyr	Asn	Trp	Phe	Phe	Leu	Ala	Arg	Pro	Thr	Thr	Phe	Ala	Ile
				140					145					150

Ile	Glu	Asn	Leu	Lys	Tyr	Phe	Leu	Leu	Lys	Lys	Asp	Pro	Ser	Gln
				155					160					165

Pro	Phe	Tyr	Leu	Gly	His	Thr	Ile	Lys	Ser	Gly	Asp	Leu	Glu	Tyr
				170					175					180

Val	Gly	Met	Glu	Gly	Gly	Ile	Val	Leu	Ser	Val	Glu	Ser	Met	Lys
				185					190					195

Arg	Leu	Asn	Ser	Leu	Leu	Asn	Ile	Pro	Glu	Lys	Cys	Pro	Glu	Gln
				200					205					210

Gly	Gly	Met	Ile	Trp	Lys	Ile	Ser	Glu	Asp	Lys	Gln	Leu	Ala	Val
				215					220					225

Cys Leu Lys Tyr Ala Gly Val Phe Ala Glu Asn Ala Glu Asp Ala

	230	235	240
Asp Gly Lys Asp	Val Phe Asn Thr Lys	Ser Val Gly Leu Ser	Ile
	245	250	255
Lys Glu Ala Met	Thr Tyr His Pro Asn	Gln Val Val Glu Gly	Cys
	260	265	270
Cys Ser Asp Met	Ala Val Thr Phe Asn	Gly Leu Thr Pro Asn	Gln
	275	280	285
Met His Val Met	Met Tyr Gly Val Tyr	Arg Leu Arg Ala Phe	Gly
	290	295	300
His Ile Phe Asn	Asp Ala Leu Val Phe	Leu Pro Pro Asn Gly	Ser
	305	310	315

Asp Asn Asp

<210> 342

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 342

tccccaagcc gttctagacg cgg 23

<210> 343

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 343

ctggttcttc cttgcacg 18

<210> 344

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 344

gcccaaatgc cctaaggcgg tatacccc 28

<210> 345

<211> 50

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 345
gggtgtgatg cttggaagca ttttctgtgc ttgatcact atgctaggac 50

<210> 346
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 346
gggatgcagg tggtgtctca tgggg 25

<210> 347
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 347
ccctcatgta ccggctcc 18

<210> 348
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 348
ggattctaatt acgactcact atagggctca gaaaagcgca acagagaa 48

<210> 349
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 349
ctatgaaatt aaccctcact aaagggatgt cttccatgcc aaccttc 47

<210> 350
<211> 48
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 350

ggatttctaatacgcactcactatagggcgccgatgtccactggggctac48

<210> 351

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 351

ctatgaaattaacccctcactaaagggacgaggaagatgggcgatggt48

<210> 352

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 352

ggatttctaatacgcactcactatagggcaccacgcgtccggctgctt47

<210> 353

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 353

ctatgaaattaacccctcactaaagggacggggacaccacggaccaga48

<210> 354

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 354

ggatttctaatacgcactcactatagggcttgctgcggttttgttcctg48

<210> 355

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 355
ctatgaaatt aaccctcact aaaggagct gccgatcca ctggtatt 48

<210> 356
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 356
ggattctaatacgcactcactatagggcgga tcctggccgg cctctg 46

<210> 357
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 357
ctatgaaatt aaccctcact aaaggagcc cgggcatggt ctcagtta 48

<210> 358
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 358
ggattctaatacgcactcactatagggcggg aagatggcga ggaggag 47

<210> 359
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 359
ctatgaaatt aaccctcact aaagggacca aggccacaaa cggaatac 48

<210> 360
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 360
ggattctaatacgcactcactatagggctgt gctttcattc tgccagta 48

<210> 361
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 361
ctatgaaatt aaccctcact aaaggaggagg tacaattaag gggtaggat 48

<210> 362
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 362
ggatttctaatt acgactcact ataggggcccg cctcgctcct gctcctg 47

<210> 363
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 363
ctatgaaatt aaccctcact aaaggaggagg ttgccgcgac cctcacag 48

<210> 364
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 364
ggatttctaatt acgactcact ataggggccc tctgccttc cctgtcc 47

<210> 365
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 365
ctatgaaatt aaccctcact aaaggaggagt gtggccgcga ttatctgc 48

<210> 366

<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 366
ggattctaatacgcactcactatagggcgca gcgatggcagcgatgagg 48

<210> 367
<211> 47

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 367
ctatgaaattaacctcactaaagggacagacggggcagagggagtg 47

<210> 368
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 368
ggattctaatacgcactcactatagggccaggagcggtgaggagaaac 47

<210> 369
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 369
ctatgaaattaacctcactaaagggaaagacatgtcatcgggagtg 48

<210> 370
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 370
ggattctaatacgcactcactatagggccgggtggaggtggaacagaaa 48

<210> 371
<211> 48

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 371
ctatgaaatt aaccctcact aaagggacac agacagagcc ccatacgc 48

<210> 372
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 372
ggatttctaatacgcactcact atagggccag ggaaatccgg atgtctc 47

<210> 373
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 373
ctatgaaatt aaccctcact aaaggaggata aggggatgcc accgagta 48

<210> 374
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 374
ggatttctaatacgcactcact atagggccag ctacccgcag gaggagg 47

<210> 375
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 375
ctatgaaatt aaccctcact aaagggatcc caggtgatga ggtccaga 48

<210> 376
<211> 997
<212> DNA
<213> Homo Sapien

<400> 376

cccacgcgtc cgatcttacc aacaaaacac tcctgaggag aaagaaagag 50
agggagggag agaaaaagag agagagagaa acaaaaaacc aaagagagag 100
aaaaaatgaa ttcattctaaa tcattctgaaa cacaatgcac agagagagga 150
tgctttctctt cccaaatgtt cttatggact gttgctggga tccccatcct 200
attttctcagt gcctgtttca tcaccagatg tgttgtgaca tttcgcatct 250
ttcaaacctg tgatgagaaa aagtttcagc tacctgagaa tttcacagag 300
ctctcctgct acaattatgg atcaggttca gtcaagaatt gttgtccatt 350
gaactgggaa tattttcaat ccagctgcta cttcttttct actgacacca 400
tttctctgggc gttaagttaa aagaactgct cagccatggg ggctcacctg 450
gtgggttatca actcacagga ggagcaggaa ttcctttcct acaagaaacc 500
taaaatgaga gagtttttta ttggactgtc agaccagggt gtcgagggtc 550
agtggcaatg ggtggacggc acacctttga caaagtctct gagcttctgg 600
gatgtagggg agcccaacaa catagctacc ctggaggact gtgccaccat 650
gagagactct tcaaacccaa ggcaaaattg gaatgatgta acctgtttcc 700
tcaattatit tcggatttgt gaaatggtag gaataaatcc tttgaacaaa 750
ggaaaatctc ttaagaaca gaaggcacaa ctcaaattgt taaagaagga 800
agagcaagaa catggccaca cccaccgccc cacacgagaa atttgtgctc 850
tgaacttcaa aggacttcat aagtatttgt tactctgata caaataaaaa 900
taagtagttt taaatgttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 950
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 997

<210> 377

<211> 219

<212> PRT

<213> Homo Sapien

<400> 377

Met	Asn	Ser	Ser	Lys	Ser	Ser	Glu	Thr	Gln	Cys	Thr	Glu	Arg	Gly
1				5					10					15
Cys	Phe	Ser	Ser	Gln	Met	Phe	Leu	Trp	Thr	Val	Ala	Gly	Ile	Pro
				20					25					30
Ile	Leu	Phe	Leu	Ser	Ala	Cys	Phe	Ile	Thr	Arg	Cys	Val	Val	Thr
				35					40					45

Phe	Arg	Ile	Phe	Gln	Thr	Cys	Asp	Glu	Lys	Lys	Phe	Gln	Leu	Pro	
				50					55					60	
Glu	Asn	Phe	Thr	Glu	Leu	Ser	Cys	Tyr	Asn	Tyr	Gly	Ser	Gly	Ser	
				65					70					75	
Val	Lys	Asn	Cys	Cys	Pro	Leu	Asn	Trp	Glu	Tyr	Phe	Gln	Ser	Ser	
				80					85					90	
Cys	Tyr	Phe	Phe	Ser	Thr	Asp	Thr	Ile	Ser	Trp	Ala	Leu	Ser	Leu	
				95					100					105	
Lys	Asn	Cys	Ser	Ala	Met	Gly	Ala	His	Leu	Val	Val	Ile	Asn	Ser	
				110					115					120	
Gln	Glu	Glu	Gln	Glu	Phe	Leu	Ser	Tyr	Lys	Lys	Pro	Lys	Met	Arg	
				125					130					135	
Glu	Phe	Phe	Ile	Gly	Leu	Ser	Asp	Gln	Val	Val	Glu	Gly	Gln	Trp	
				140					145					150	
Gln	Trp	Val	Asp	Gly	Thr	Pro	Leu	Thr	Lys	Ser	Leu	Ser	Phe	Trp	
				155					160					165	
Asp	Val	Gly	Glu	Pro	Asn	Asn	Ile	Ala	Thr	Leu	Glu	Asp	Cys	Ala	
				170					175					180	
Thr	Met	Arg	Asp	Ser	Ser	Asn	Pro	Arg	Gln	Asn	Trp	Asn	Asp	Val	
				185					190					195	
Thr	Cys	Phe	Leu	Asn	Tyr	Phe	Arg	Ile	Cys	Glu	Met	Val	Gly	Ile	
				200					205					210	
Asn	Pro	Leu	Asn	Lys	Gly	Lys	Ser	Leu							
				215											

<210> 378

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 378

ttcagcttct gggatgtagg g 21

<210> 379

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 379

tattcctacc atttcacaaa tccg 24

<210> 380
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 380
ggaggactgt gccaccatga gagactcttc aaaccaagg caaaattgg 49

<210> 381
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 381
gcagattttg aggacagcca cctcca 26

<210> 382
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 382
ggccttgacg acaaccgt 18

<210> 383
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 383
cagactgagg gagatccgag a 21

<210> 384
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 384
cagctgccct tccccaacca 20

<210> 385

<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 385
catcaagcgc ctctacca 18

<210> 386
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 386
cacaaactcg aactgcttct g 21

<210> 387
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 387
gggccatcac agctccct 18

<210> 388
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 388
gggatgtggt gaacacagaa ca 22

<210> 389
<211> 22

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 389
tgccagctgc atgctgccag tt 22

<210> 390
<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 390
cagaaggatg tcccgtggaa 20

<210> 391
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 391
gccgctgtcc actgcag 17

<210> 392
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 392
gacggcatcc tcagggccac a 21

<210> 393
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 393
atgtcctcca tgcccacgcg 20

<210> 394
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 394
gagtgcgaca tcgagagctt 20

<210> 395
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
ccgcagcctc agtgatga 18

<210> 396
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
gaagagcaca gctgcagatc c 21

<210> 397
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
gaggtgtcct ggctttggta gt 22

<210> 398
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 398
cctctggcgc cccactcaa 20

<210> 399
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 399
ccaggagagc tggcgatg 18

<210> 400
<211> 23
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 400

gcaaattcag ggctcactag aga 23

<210> 401

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 401

cacagagcat ttgtccatca gcagttcag 29

<210> 402

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 402

ggcagagact tccagtcact ga 22

<210> 403

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 403

gccaaaggggtg gtgttagata gg 22

<210> 404

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 404

caggccccct tgatctgtac ccca 24

<210> 405

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe,

<400> 405
gggacgtgct tctacaagaa cag 23

<210> 406
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 406
caggcttaca atgttatgat cagaca 26

<210> 407
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 407
tattcagagt tttccattgg cagtgccagt t 31

<210> 408
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 408
tctacatcag cctctctgcg c 21

<210> 409
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 409
cgatcttctc cacccaggag cgg 23

<210> 410
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 410
gccaggcctc acattcgt 18

<210> 411
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 411
ctccctgaat ggcagcctga gca 23

<210> 412
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 412
aggtgtttat taagggccta cgct 24

<210> 413
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 413
cagagcagag ggtgccttg 19

<210> 414
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 414
tggcggagtc ccctcttggc t 21

<210> 415
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 415
ccctgtttcc ctatgcatca ct 22

<210> 416
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 416
tcaaccctg accctttcct a 21

<210> 417
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 417
ggcaggggac aagccatctc tcct 24

<210> 418
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 418
gggactgaac tgccagcttc 20

<210> 419
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 419
gggccctaac ctcattacct tt 22

<210> 420
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 420
tgtctgcctc agccccagga agg 23

<210> 421
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 421
tctgtccacc atcttgcctt g 21

<210> 422
<211> 3554
<212> DNA
<213> Homo Sapien

<400> 422
gggactacaa gccgcgccgc gctgccgctg gcccctcagc aaccctcgac 50
atggcgctga ggcgccacc gcgactccgg ctctgcgctc ggctgcctga 100
cttcttctctg ctgctgcttt tcaggggctg cctgataggg gctgtaaatc 150
tcaaatccag caatcgaacc ccagtggtag aggaatttga aagtgtggaa 200
ctgtcttgca tcattacgga ttgcgagaca agtgacccca ggatcgagtg 250
gaagaaaatt caagatgaac aaaccacata tgtgtttttt gacaacaaaa 300
ttcagggaga cttggcgggg cgtgcagaaa tactggggaa gacatccctg 350
aagatctgga atgtgacacg gagagactca gccctttatc gctgtgaggt 400
cgttgctcga aatgaccgca aggaaattga tgagattgtg atcgagttaa 450
ctgtgcaagt gaagccagtg acccctgtct gtagagtgcc gaaggctgta 500
ccagtaggca agatggcaac actgcactgc caggagagtg agggccaccc 550
ccggcctcac tacagctggg atcgcaatga tgtaccactg cccacggatt 600
ccagagccaa tcccagattt cgcaattctt ctttccactt aaactctgaa 650
acaggcactt tgggtgttcac tgctgttcac aaggacgact ctgggcagta 700
ctactgcatt gcttccaatg acgcaggctc agccagggtg gaggagcagg 750
agatggaagt ctatgacctg aacattggcg gaattattgg gggggttctg 800
gttgtccttg ctgtactggc cctgatcacg ttgggcatct gctgtgcata 850
cagacgtggc tacttcatca acaataaaca ggatggagaa agttacaaga 900
accaggga accagatgga gttaactaca tccgcactga cgaggagggc 950
gacttcagac acaagtcatc gtttgtgatc tgagaccgc ggtgtggctg 1000
agagcgcaca gagcgcacgt gcacatacct ctgctagaaa ctctgtcaa 1050

ggcagcgaga gctgatgcac tcggacagag ctagacactc attcagaagc 1100
ttttcgtttt ggccaaagt gaccactact cttcttactc taacaagcca 1150
catgaataga agaattttcc tcaagatgga cccggtaaata ataaccacaa 1200
ggaagcgaaa ctgggtgctg tcaactgagtt gggttcctaa tctgtttctg 1250
gcctgattcc cgcattgagta ttaggggtgat cttaaagagt ttgctcacgt 1300
aaacgcccgt gctgggccct gtgaagccag catgttcacc actggtcggt 1350
cagcagccac gacagcacca tgtgagatgg cgagggtggt ggacagcacc 1400
agcagcgcat cccggcgga acccagaaaa ggcttcttac acagcagcct 1450
tacttcatcg gccacagac accaccgag tttcttctta aaggctctgc 1500
tgatcgggtg tgcatgtcc attgtggaga agctttttgg atcagcattt 1550
tgtaaaaaca accaaaatca ggaaggtaaa ttggttgctg gaagagggat 1600
cttgctgag gaaccctgct tgtccaacag ggtgtcagga ttttaaggaaa 1650
accttcgtct taggctaagt ctgaaatggt actgaaatat gcttttctat 1700
gggtcttggt tattttataa aattttacat ctaaattttt gctaaggatg 1750
tattttgatt attgaaaaga aaatttctat ttaaactgta aatatattgt 1800
catacaatgt taaataacct atttttttta aaaagttaa ctttaaggtag 1850
aagttccaag ctactagtgt taaattggaa aatatcaata attaagagta 1900
ttttaccaa ggaatcctct catggaagtt tactgtgatg ttccttttct 1950
cacacaagtt ttagcctttt tcacaaggga actcactctg tctacacatc 2000
agaccatagt tgcttaggaa acctttaaaa attccagtta agcaatggtg 2050
aaatcagttt gcatctcttc aaaagaaacc tctcaggtta gctttgaact 2100
gcctcttctt gagatgacta ggacagtctg taccagagg ccaccagaa 2150
gccctcagat gtacatacac agatgccagt cagctcctgg ggttgcgcca 2200
ggcgccccg ctctagctca ctgttgctc gctgtctgcc aggaggccct 2250
gccatccttg gccctggca gtggctgtgt cccagtgagc ttactcacg 2300
tggcccttgc ttcattccagc acagctctca ggtgggcact gcagggacac 2350
tggtgtcttc catgtagcgt cccagctttg ggctcctgta acagacctct 2400
ttttggttat ggatggctca caaaataggg ccccaatgc tatttttttt 2450
ttttaagttt gtttaattat ttgttaagat tgtctaaggc caaaggcaat 2500

tgcgaaatca agtctgtcaa gtacaataac atttttaaaa gaaaatggat 2550
 cccactgttc ctctttgccca cagagaaaagc acccagacgc cacaggctct 2600
 gtcgcatttc aaaacaaacc atgatggagt ggcggccagt ccagcctttt 2650
 aaagaacgtc aggtggagca gccaggtgaa aggcctggcg gggaggaaaag 2700
 tgaaacgcct gaatcaaaaag cagttttcta attttgactt taaatttttc 2750
 atccgccgga gacactgctc ccatttgtgg ggggacatta gcaacatcac 2800
 tcagaagcct gtgttcttca agagcaggtg ttctcagcct cacatgccct 2850
 gccgtgctgg actcaggact gaagtgtgtt aaagcaagga gctgctgaga 2900
 aggagcactc cactgtgtgc ctggagaatg gctctcacta ctcaccttgt 2950
 ctttcagctt ccagtgtctt gggtttttta tactttgaca gctttttttt 3000
 aattgcatac atgagactgt gttgactttt tttagttagt tgaaacactt 3050
 tgccgcaggc cgcctggcag aggcaggaaa tgctccagca gtggctcagt 3100
 gctccctggt gtctgctgca tggcatcctg gatgcttagc atgcaagttc 3150
 cctccatcat tgccaccttg gtagagaggg atggctccc accctcagcg 3200
 ttggggattc acgctccagc ctcttcttg gttgtcatag tgatagggt 3250
 gccttattgc cccctcttct tataccctaa aaccttctac actagtcca 3300
 tgggaaccag gtctgaaaaa gtagagagaa gtgaaagtag agtctgggaa 3350
 gtagctgcct ataactgaga ctagacggaa aaggaatact cgtgtatttt 3400
 aagatatgaa tgtgactcaa gactcgaggc cgatacgagg ctgtgattct 3450
 gcctttggat ggatgttgct gtacacagat gctacagact tgtactaaca 3500
 caccgtaatt tggcatttgt ttaacctcat ttataaaagc ttcaaaaaaa 3550
 ccca 3554

<210> 423
 <211> 310
 <212> PRT
 <213> Homo Sapien

<400> 423
 Met Ala Leu Arg Arg Pro Pro Arg Leu Arg Leu Cys Ala Arg Leu
 1 5 10 15
 Pro Asp Phe Phe Leu Leu Leu Leu Phe Arg Gly Cys Leu Ile Gly
 20 25 30

Ala	Val	Asn	Leu	Lys	Ser	Ser	Asn	Arg	Thr	Pro	Val	Val	Gln	Glu	35	40	45
Phe	Glu	Ser	Val	Glu	Leu	Ser	Cys	Ile	Ile	Thr	Asp	Ser	Gln	Thr	50	55	60
Ser	Asp	Pro	Arg	Ile	Glu	Trp	Lys	Lys	Ile	Gln	Asp	Glu	Gln	Thr	65	70	75
Thr	Tyr	Val	Phe	Phe	Asp	Asn	Lys	Ile	Gln	Gly	Asp	Leu	Ala	Gly	80	85	90
Arg	Ala	Glu	Ile	Leu	Gly	Lys	Thr	Ser	Leu	Lys	Ile	Trp	Asn	Val	95	100	105
Thr	Arg	Arg	Asp	Ser	Ala	Leu	Tyr	Arg	Cys	Glu	Val	Val	Ala	Arg	110	115	120
Asn	Asp	Arg	Lys	Glu	Ile	Asp	Glu	Ile	Val	Ile	Glu	Leu	Thr	Val	125	130	135
Gln	Val	Lys	Pro	Val	Thr	Pro	Val	Cys	Arg	Val	Pro	Lys	Ala	Val	140	145	150
Pro	Val	Gly	Lys	Met	Ala	Thr	Leu	His	Cys	Gln	Glu	Ser	Glu	Gly	155	160	165
His	Pro	Arg	Pro	His	Tyr	Ser	Trp	Tyr	Arg	Asn	Asp	Val	Pro	Leu	170	175	180
Pro	Thr	Asp	Ser	Arg	Ala	Asn	Pro	Arg	Phe	Arg	Asn	Ser	Ser	Phe	185	190	195
His	Leu	Asn	Ser	Glu	Thr	Gly	Thr	Leu	Val	Phe	Thr	Ala	Val	His	200	205	210
Lys	Asp	Asp	Ser	Gly	Gln	Tyr	Tyr	Cys	Ile	Ala	Ser	Asn	Asp	Ala	215	220	225
Gly	Ser	Ala	Arg	Cys	Glu	Glu	Gln	Glu	Met	Glu	Val	Tyr	Asp	Leu	230	235	240
Asn	Ile	Gly	Gly	Ile	Ile	Gly	Gly	Val	Leu	Val	Val	Leu	Ala	Val	245	250	255
Leu	Ala	Leu	Ile	Thr	Leu	Gly	Ile	Cys	Cys	Ala	Tyr	Arg	Arg	Gly	260	265	270
Tyr	Phe	Ile	Asn	Asn	Lys	Gln	Asp	Gly	Glu	Ser	Tyr	Lys	Asn	Pro	275	280	285
Gly	Lys	Pro	Asp	Gly	Val	Asn	Tyr	Ile	Arg	Thr	Asp	Glu	Glu	Gly	290	295	300
Asp	Phe	Arg	His	Lys	Ser	Ser	Phe	Val	Ile						305	310	